Vol. XII FEBRUARY, 1901 No. 2

CONTENTS

AN AROUND-THE-WORLD AMERICAN EXPOSITION. BY HON. O. P. AUSTIN, CHIEF OF THE BUREAU OF STATISTICS . . . PAGE 65

THE CAUSES THAT LED UP TO THE SIEGE OF PEKIN. BY DR. W. A. P. MARTIN. ILLUSTRATED . . . 81

SINGAN—THE PRESENT CAPITAL OF THE CHINESE EMPIRE. BY JAMES MASCARENE HUBBARD . . . 93

THE MIDNIGHT SUN IN THE KLONDIKE. BY ALICE ROLLINS CRANE. ILLUSTRATED . . . 98

JAPAN AND CHINA—SOME COMPARISONS. BY COMMANDER HARRIS WEBSTER, U. S. N. ILLUSTRATED . . . 105

GEOGRAPHIC NOTES. ILLUSTRATED . . . 117

PROCEEDINGS OF THE NATIONAL GEOGRAPHIC SOCIETY . . . 128

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VOL. XII, No. 2 WASHINGTON FEBRUARY, 1901

THE NATIONAL GEOGRAPHIC MAGAZINE

AN AROUND-THE-WORLD AMERICAN EXPOSITION

BY HON. O. P. AUSTIN, CHIEF OF THE BUREAU OF STATISTICS

A FLOATING exposition, carrying samples of our merchandise around the world and putting our merchants in touch with those of all nations, seems to me a fitting American enterprise for the beginning of the new century. The nineteenth century has made the United States the greatest exporting nation of the world; why not begin the twentieth by showing to all the world what we have to sell and how we can sell it?

Exhibitions of the products of industry have proved beneficial to trade wherever undertaken, whether the ancient "fair" or the more modern "exposition." The traveling salesman with his sample cases has become a necessity of modern mercantile success; "commercial museums" exhibit to the dealers of one country the class of goods required in other lands, and the great European nations now send out "commercial missions" to inquire into and report upon the trade opportunities in distant countries.

But each of these methods has its limit of influence. The fair or exposition is dependent for its success upon the number of people it can attract to its doors, the traveling salesman represents but a single establishment or industry, the commercial museum conveys its information only to the seller and not to the buyer, and the commercial mission gathers information regarding the wants of distant people, but is unable to offer them samples of the goods which its own people have to meet those wants.

Why not combine the valuable features of these various aids to commerce in a single great enterprise—a "floating exposition," which shall carry samples of our merchandise to the very doors of the people whose trade we would foster, and by bringing the buyer and seller into personal contact, establish such mutual understanding of wants and conditions as to facilitate the interchange for which each is desirous?

FIELDS AWAITING AMERICAN ENTERPRISE.

The imports of Asia, Oceania, Africa, and the American countries south of the

United States amount to over two billion dollars every year. Nearly all of these importations *are of the very class of goods which we want to sell*—foodstuffs, textiles, mineral oils, machinery, and manufactures of all kinds; yet our sales to these grand divisions in the best year of our commerce, 1900, only amounted to about $200,000,000, or 10 per cent of their purchases. The annual imports of Asia and Oceania are over a billion dollars, those of Africa over four hundred millions, and those of the countries lying south of the United States about six hundred millions.

Most of the cities through which these two billion dollars' worth of goods are first distributed lie on the seacoast, and could be readily reached by a fleet of vessels loaded with samples of American products and manufactures. It is well known that the lack of practical knowledge as to the local trade requirements, such as methods of packing, kind of goods required, length of credit, etc., is the chief obstacle to the introduction of American goods in these countries, and that until this obstacle shall have been overcome we cannot expect to obtain the share in that trade to which our location and facilities of production and manufacture entitle us.

If a floating exposition were systematically organized, loading one vessel with exhibits of foodstuffs, another with textiles, another with agricultural implements and vehicles, another with manufactures of iron and steel, another with household requirements, and another with "Yankee notions," and sent from port to port and continent to continent, it should prove highly advantageous to our commercial relations with all of the countries visited.

Every manufacturer or exporter sending an exhibit would naturally send with it a capable representative, who could discuss with the local merchant the qualities of his goods and their fitness or unfitness for local markets.

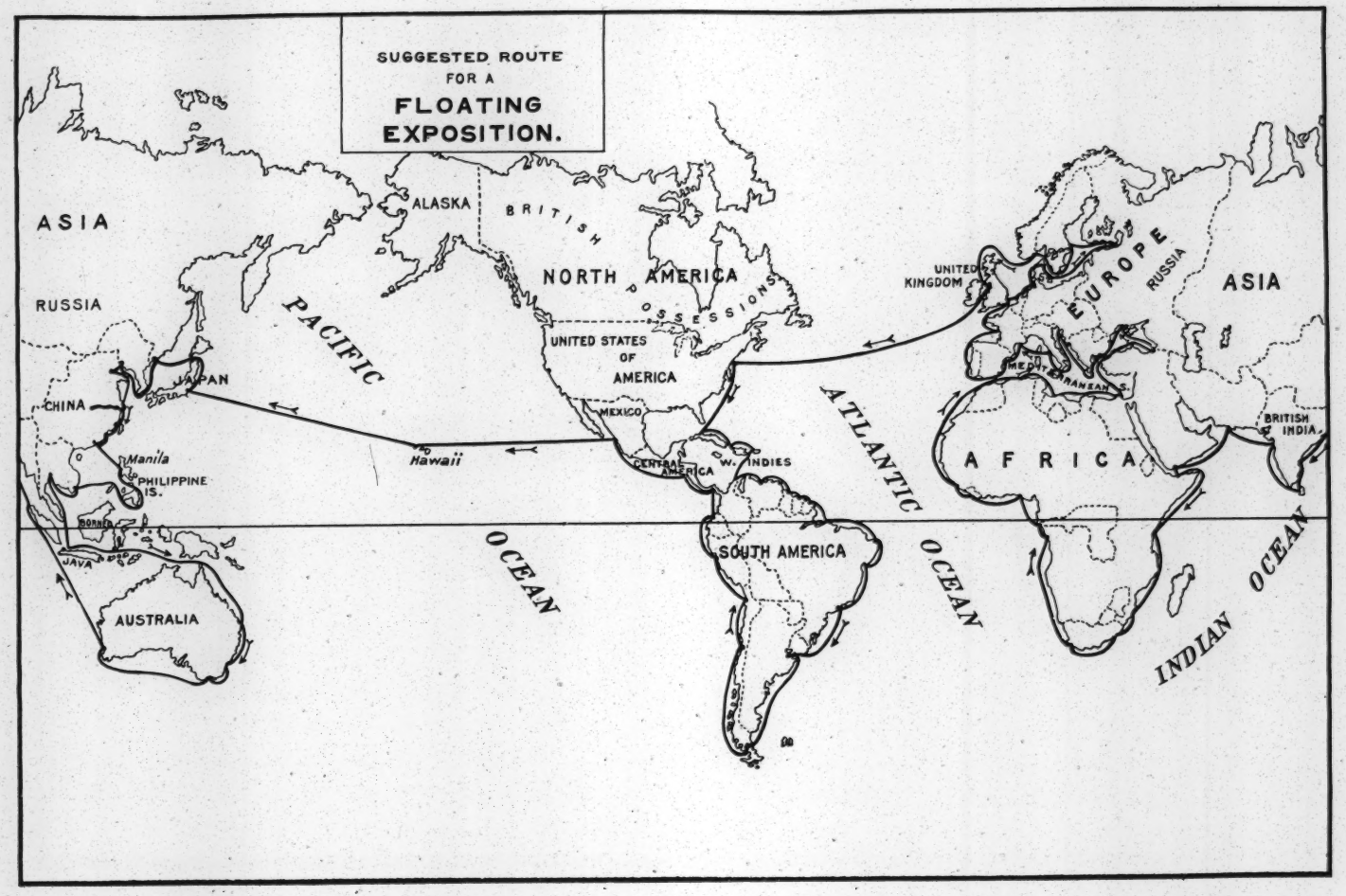
The coming of an exhibition of this character would attract at each port not only the business men of that city, but those of other commercial centers in the vicinity, and by this process the wholesale merchant of the United States would speak face to face with those of every country visited, and in these discussions would learn in a practical way the obstacles which now prevent a free interchange of commerce and the methods by which they can be overcome.

In addition to this, a corps of experts could gather samples of the goods now being sold in the countries visited, the prices obtained, the length of credit given, the banking and exchange facilities existing and required, and other facts which would prove valuable not only to those directly participating in the enterprise, but to all manufacturers and merchants of the United States, by their exhibition in commercial museums and by published reports.

THE FINANCING OF A FLOATING EXPOSITION.

The financing of an undertaking which contemplates sending a fleet of a half dozen vessels for a two years' voyage around the world appears at first sight a serious problem; but present conditions seem to be exceptionally favorable.

The producers, manufacturers, and merchants of the United States are greatly interested in the extension of markets for American goods, and the Bureau of Statistics is daily besieged with inquiries for information bearing upon this subject. The past three years have been exceptionally successful, and yet have shown the necessity of finding an increased outlet for the surplus which the American manufacturers show themselves capable of producing, and it seems not unreasonable to believe that they would look upon a reasonable expenditure for the extension of trade as money well invested. A great world's fair has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just been held at Paris, at which many Americans made exhibits, some parts of which would be suited to a floating exposition such as has been suggested. A great exposition, especially intended to apply to the people of Central and South America, is to be held at Buffalo this year, and its exhibits would in many cases prove a basis for an undertaking of this kind, while another exposition, especially relating to the West Indian trade, is to be held at Charleston. Thus, in the disposition to extend our commerce, in a prosperity which warrants new business ventures, and even in the partial preparation of exhibits, the circumstances appear to be especially favorable.

But there is still another condition which seems even more opportune and advantageous. The Government is the possessor of a considerable number of safe and seaworthy merchant vessels purchased as transports during the war with Spain, for many of which it will not have active use after the close of hostilities in the Philippines. If some of these vessels could be utilized for this work the problem, as to cost, would be greatly simplified.

Congress has always dealt liberally with expositions intended to improve our commerce, either at home or abroad, and it seems not unreasonable to suppose that if applied to by a proper business organization it might loan the necessary vessels for an enterprise of this kind. The appropriations of money made by Congress in behalf of expositions at home and abroad in the past 25 years amount to over $10,000,000, and in view of this it would appear probable that an appeal from a properly organized association of business men might meet with favorable consideration.

If there could be added to this fleet of five or six merchant vessels a naval vessel or two to convoy the fleet around the world and add to its attractiveness and dignity, the success of the enterprise, intelligently managed, should be assured. The chief expense which the ordinary exposition must undergo is the erection of buildings. The construction account of the World's Fair in 1893 was 70 per cent of the entire cost. With this expense obviated by the loan of vessels, if they could be so obtained, the cost of the undertaking would lie chiefly in the coal consumed in passing from port to port, and in the force of men necessary for the management of the vessels, and this might also be small in case Congress should accompany the loan of the vessels with a suitable detail from the military or naval force for their management.

Whether the expense should be borne solely by those participating in the exhibition in proportion to the space they might occupy, or be met in part by a small charge for admission could be determined by those guaranteeing the expense of the enterprise. In the ordinary exposition the chief receipts are from admissions, and these are drawn entirely from the population of the city where the exposition occurs and from those visiting that city for that purpose, while in the case of a floating exposition visiting great cities in various parts of the world the local population which could be appealed to would aggregate many millions.

THE ROUTE FOR A FLOATING EXPOSITION.

The route which a floating exposition might determine for itself would be bounded only by the limits of the great seas upon which it would float. Starting from the eastern coast of the United States, it would perhaps make its first stop at our new possession, Porto Rico, thence to Cuba and other of the West Indies, thence to the principal cities on the eastern coast of Central and South America, thence along the western coast of America, then to the Hawaiian Islands,

Japan, Korea, Asiatic Russia, the coast cities of China, the Philippines, Siam, the Dutch East Indies, Australia, the Malay Peninsula, India, Persia, Arabia, the eastern and then the western coast of Africa, then a tour of the Mediterranean and the cities of western Europe, and thence back to the place of origin, occupying two or perhaps three years, and meantime carrying the American flag and American enterprise to every part of the world. Why not an Around-the-world American Exposition to inaugurate the twentieth century ?

THE CAUSES THAT LED UP TO THE SIEGE OF PEKIN

By Dr. W. A. P. Martin

I HAVE been asked to give some account of the siege in Pekin, together with the causes that led up to it, and its probable outcome. No proper view of the thrilling events which have there taken place can be given without first touching upon the *geographical situation*. Man is moulded by his environment, and it would not be difficult to show how the character of the Chinese—physical, moral, and intellectual—has been formed by the geography of their country.

Of England a well-known poet, after satirizing the villainous climate of his country, exclaims:

> "'Tis thus, with rigor for his good designed,
> She rears her favorite man of all mankind."

A Chinese philosopher would unquestionably adopt without objection every word of the English poet, and he would lay special emphasis on the phrase "her favorite man of all mankind." He reads in the ancient books of his own country a tradition that man was made not of dust, but of clay, the clay being of different colors. The Chinese were made first, and of yellow clay; hence they gave themselves the flattering designation of "Men of Gold." That title we find to have been a common one among the Tatars of the north. In the eleventh and twelfth centuries a large part of northern China was subject to a body of Tatars, who bore the tribal name of "Golden Horde." The present rulers of China, called Manchus, claim them for their remote ancestors, and continue to wear the same title of "Golden Horde"—in the Manchu language "*Aischin Gioro.*"

SEVEN CENTURIES OF FOREIGN RULE.

The relations of the Tatars to the Chinese from time immemorial have been very similar to those of the Shepherd Kings to the rich inhabitants of the Nile Valley. The Chinese depended upon agriculture, while the wandering nomads of the northern plains subsisted on their flocks and herds without settled homes. They were always ready to make incursions into the bordering provinces of China, and oftentimes succeeded in effecting the conquest of a portion or the whole of the Chinese Empire.

It is startling to discover that one or other of these Northern tribes, Mongol or Manchu, has exercised the mastery over China for seven hundred out of the

last fifteen hundred years; nor are the troubles caused by them limited to seven centuries, for the Great Wall, so huge as to form a geographical feature on the surface of the globe, attests a perennial conflict between Tatar and Chinese, for it was erected two hundred and forty years before the Christian era for the express purpose of keeping the Tatars out. That such a conflict should exist from generation to generation is no matter of surprise. Schiller tells us that it began not far from the Garden of Eden, and has been handed down from Cain and Abel to the present time. His version of the Bible story is that Abel's sheep trespassed on the cornfields of his brother Cain.

A Chinese historian says of the Great Wall: "It required so much labor for its construction that it was the ruin of one generation, but it was the salvation of all that followed." To me this appears to be an overestimate of its benefits; for while it has undoubtedly served the purpose of a barrier against small bodies of marauders, it has never sufficed to restrain great armies like those of Jenghis Khan. The Manchus, who for two hundred and fifty-six years have held the throne in Pekin, were not under the necessity of forcing their way across this international barrier, but had its gates thrown wide open for them by a Chinese general, Wu San Kwei. He invited their assistance to suppress a body of rebels who had taken possession of the capital, and to revenge the crimes committed by them, an errand very similar to that of the eight powers now in occupation of China. The rebels were easily put to flight, but when the general offered to pay off his Tatar allies and invited them to retire to the north of the Great Wall, they respectfully declined to do so.

An old fable tells us that an ass, in danger of being driven from his pasture grounds by a horned stag, invited a primitive man to mount on his back and drive away his enemy. When the stag was put to flight, he asked the man to dismount; but he was an ass to imagine that the man would comply with his wishes.

China finds herself in the same predicament today. Instead of the Manchu-Tatars, ranged curiously enough under eight banners, she finds herself completely under the power of the eight mightiest nations of the globe. They are in the saddle, with their bit in the ass's mouth, and though that noble beast, like that of the ancient prophet, speaks with human voice, and utters an energetic protest, it remains to be seen whether some of these eight nations will not persist in keeping their place in the saddle.

The fact that China is and has been under foreign domination for two centuries and a half is essential to the comprehension of that astounding movement which has so engrossed the attention of the world.

What motives, we are asked, could prove themselves so potent in their effect on all classes in that empire as to bring about combined action of high and low for the expulsion of foreigners? I answer that there are three motives which, taken in connection with the circumstances of the age, appear to me to be sufficient to account for the phenomenon. They are: first, political jealousy, second, religious antipathy, and last, but not least, industrial competition. These have operated in different proportions on different classes, while in some instances all three have combined to produce their effect on the mind of one class. The existence of political jealousy is inseparable from a foreign domination.

The Manchu dynasty, though it has produced many able rulers, has never been free from the influence of that kind of jealousy. The Manchus have always feared, since the dawn of commercial intercourse with the great nations of the west, that some of those nations

would endeavor to supplant them in the occupation of China. They have accordingly been suspicious of everything, whether commerce, missionary enterprise, or railways and mines, which tended to increase the prestige of foreigners. Some of these undertakings they have looked upon as a preëmption claim on their territory; others as a settled scheme for winning away the hearts of their people. You will naturally infer that they have never shown themselves, with one exception which I shall presently mention, very solicitous for the intellectual enlightenment of their Chinese subjects.

The old philosopher, Laotse, lays down as a maxim for easy government, in satire no doubt, that it is only necessary to fill the people's bellies and to empty their skulls. On this the present rulers of China—I mean the Empress Dowager and her clique—are acting in the suppression of schools, the interdiction of newspapers, and the attempted extirpation of Christian missions.

THE REFORMS ATTEMPTED BY EMPEROR KWANG SU.

The exception is a remarkable one. It is the young Emperor, Kwang Su, who is in no degree responsible for hostilities with foreign powers, but is rather to be regarded as the first victim on a long and sanguinary list. Nephew of the Empress Dowager, he was adopted by her at the age of three.

With a view to preparing him for his great destiny, he was provided with numerous instructors, two of whom were my own students. Their duty was to induct His Majesty into a knowledge of the English language, and, in order to be sure that the lessons which they set for him were correct, they always submitted them to me for approval. I shall not affirm, therefore, that I am entirely innocent of having exerted some influence to bias the mind of the young Emperor.

It is impossible that he should have studied English without becoming infected with progressive ideas. Still, the blame, or the honor, of having perverted the mind of the "illustrious successor" (as his name signifies) belongs to Kang Yu Wei more than to any one else. This patriotic scholar perceived the necessity of reforming the educational system of China in order to secure the permanent independence of his country. He gained the ear of the Emperor, and of that young man it is no little praise to say that he possessed the intellectual capacity to comprehend the ideas of the bold reformer and the strength of will to resolve on carrying them into effect.

He issued decree after decree, with startling rapidity, setting aside the effete system of essays and sonnets in civil service examinations, in favor of the sciences and practical arts of the modern world.

In order to prepare students for these new tests, a system of common schools was to be established, Taoist, Buddhist, and Confucian temples being placed at their disposal. Middle schools were to be established in all the districts, and colleges in the several provinces, with a new university in the capital for the graduates of provincial institutions and for the sons of the nobility.

Nor did His Majesty stop with educational reform. He diligently sought to prune away the dead branches of the tree in order to increase the quantity and improve the quality of its fruit. Sinecures in the Mandarinate were abolished, and new bureaus inaugurated, such as those for commerce, mining, and agriculture.

More than all, he resolved to confer on his people the priceless boon of free speech, ordaining that even junior officials should have the privilege of addressing the throne without let or hindrance.

This was the rock on which his noble scheme of reform was shattered. A young man, a doctor in the Han Lin, who was well known to me, through a

junior member in the Board of Rites, drew up a memorial proposing numerous changes in the administration of the government. His chiefs, all old men, and mostly Tatars, refused to transmit the document to the throne. The Emperor, on learning that they had dared to intervene between him and his officials, flew into a towering rage, stripped them of their official honors, and threatened to dismiss them from the public service.

Those old men, smarting under the disgrace, posted away to the country palace and threw themselves at the feet of the Empress Dowager, begging her to come out of her retirement and save the Empire from the hands of a young man who was driving the chariot of state so furiously that there was danger of his setting the world on fire. She had been regent twice before, but she had never retired altogether from the world of politics. With her neither card parties nor novels nor theatrical shows could compete in interest with the political chessboard; in all moves on that board her fingers had been more or less concerned. Eagerly did she embrace the invitation, and as with a bolt out of the blue heavens she struck down the impetuous youth, compelling him to sign a paper begging her to teach him how to govern. By way of justifying her action, she issued an edict, in which, among other things, she said that her subjects must not suppose that she was opposed to rational progress. It does not follow, she said, that we should stop eating because we have been choked. She meant to say that her adopted son had crammed his reforms down the throats of his people too fast for their digestion. She intended to administer them with judicious moderation, in such quantity and degree as would make them easier of assimilation.

Well had it been for her and her dynasty had she adhered to this principle; on the contrary, throwing herself into the hands of a reactionary party, instead of progress she entered upon an anti-foreign reaction in which a disastrous smash-up became inevitable. She began by canceling all the educational and other administrative reforms inaugurated by the young Emperor.

The only one of the institutions established by him which she permitted to remain was the new university. That institution she no doubt spared because it had been favored or, as one might say, founded by Li Hung Chang, who, by the way, though he still continues to be her faithful servant, has behind him a record of imperishable glory as the foremost patron of the new education in the Chinese Empire. It was he who recommended me for the presidency of the university, which I may describe as at present in a state of suspended animation, the Russians having seized on the buildings for soldiers' barracks and threatened to confiscate its funds, which were deposited in Russian banks.

THE GROWTH OF THE ANTI-FOREIGN FEELING IN CHINA.

A little before the *coup d'état* Germany had seized a seaport by way of reprisals for the murder of two of her missionaries in the south of Shantung. Russia demanded the cession of Port Arthur as an offset. England insisted on having Wei Hai Wei, on the opposite side of the gulf, in order to keep watch on the movements of her northern rival. France, in the far south, protested against being left out in the cold, for was she not as great a power as any of them? She demanded that the equilibrium of the political balance should be maintained by giving her the Bay of Kwang chau, not far from the borders of her Anamite Empire. The Empress, who by this time had become Regent for the third time, was irritated beyond endurance, and while she feigned to yield to these demands rather than to make war without due preparation, she made it known to her people that if any

other nation should come forward with similar demands, she would declare war with or without preparation. In the meantime she made extensive purchases of war material, and sought by every means to propagate anti-foreign feeling among her people as the best safeguard against foreign aggression.

Never had the anti-foreign feeling been at so low an ebb as during the short reign of the young Emperor. An awakening had shown itself among the Chinese people, which might be described as a shaking among the dry bones. Newspapers in the Chinese language had increased in two or three years from 17 to 76. The publication of the society for the diffusion of Christian and useful knowledge, consisting not of "Christian science," but science christianized, increased within the same time from $800 to $18,000. The whole people were penetrated with a desire for progress, and though they had been recently beaten in war by the Japanese, they proposed to imitate their victorious enemies and learn the best lessons of the west as the surest way of rehabilitation.

When the Marquis Ito visited China, a little more than two years ago, I complimented him on the influence which his country was exerting on China in consequence of being her nearest neighbor. I compared it to the tide, raised by the moon, as our nearest neighbor in the solar system; but I took care not to hint that his country, like the moon, was shining by borrowed light. Yet it is true that the reforms which China and her young Emperor so much admired were borrowed at second hand from these United States.

Immediately on the occupation of Kiao chau the Germans proceeded to lay out railways in different directions across the province of Shantung, which they claimed as their sphere of influence, and which some of their newspapers, by way of anticipation, described as "German China." The natives were aroused, much more by these enterprises than by any abstract question of infringement of territorial rights. To them it appeared horrible that the spirits of their ancestors should be waked by the snorting of the iron horse, and that cemeteries should be desecrated by the passage of the iron road. They everywhere set upon the engineers and impeded the prosecution of their work. The most active in leading this opposition were the members of a secret society called "Boxers."

THE REVIVAL OF THE BOXERS.

That society is not a new one called into existence, as has been supposed, by the work of missions. On the contrary, it gave trouble more than a century ago to the Chinese Government, and in 1803 was formally placed upon the index of forbidden associations. Since then it has languished in obscurity until recent events called it into life, and until the favor shown it by the Empress Dowager transformed it into a great political party. The doctrine to which it owes its existence is not orthodox Confucianism, Buddhism, or Taoism, but a superstition based on hypnotism, mesmerism, or spiritualism, as it is variously called. Among its members are many whose nervous condition fits them for spiritualistic mediums, and through these the society gets oracles from the unseen world. They undergo a species of drill, which is intended to enable each member at will to go into the trance state. When in that condition they profess to be endowed with supernatural strength and rendered bullet-proof. These mysteries, so piquant to the curious at all times, were particularly attractive in view of possible hostilities with foreign nations. The organization spread like wildfire among the people of Shantung, and the Manchu governor, finding in these people an auxiliary force, supplied them with arms.

The Empress Dowager and Prince

Tuan encouraged them to come to the capital. In their devastating march they killed missionaries and laid waste Christian villages; nor did they abstain from many a village which was not Christian, but which excited their cupidity by the spoils which it offered. Reaching the vicinity of the capital, they tore up the railway leading to the west and burned down the stations near the city. Then it was, not till then, that the ministers in the capital awoke to the seriousness of the situation. Missionaries had been uttering their Cassandra warnings, but the ministers always turned for information to the Tsung Li Yamen, the official organ or Foreign Office of the Chinese Government. They were there told that these Boxers practiced an innocent kind of gymnastics, and if they did sometimes show themselves turbulent and disposed to quarrel with native Christians, it was not without cause; but the Empress Dowager intended shortly to issue a decree dismissing them to their homes. Such decrees were issued, accompanied by secret instructions not to regard them.

THE SIEGE.

The meaning of the destruction of the railway was not to be misunderstood; the ministers, without waiting for the consent of the Chinese Government, ordered a guard of marines to be sent up from the seacoast, and they arrived not a day too soon. The next day the railway to the east was also broken up, and had their arrival been delayed forty-eight hours no foreigner in Pekin would have lived to tell the tale. They were only 350 in number, but their mere presence for a time held our enemies in check, and they served eventually to make good the defense of the legations.

On June 11, a fortnight after their arrival, an attaché of the Japanese Legation was killed at the railway station by Boxers and Chinese soldiers combined. This may be regarded as introducing the first stage of the siege; for the next nine days the Boxers were specially prominent, setting fire not only to churches and mission houses, but burning up all the native storehouses which they suspected of containing foreign goods. Square miles of ground were left by them covered with the ruins of the richest business houses in Pekin. On June 19 a circular from the Foreign Office informed the foreign ministers that the admirals had demanded the surrender of the forts at the mouth of the river. This, said they, is an act of war. You must now quit the capital with all your people within four and twenty hours The ministers agreed to protest against the severity of this condition. The first to set out for the Foreign Office with this purpose in view was Baron von Ketteler, the German Minister. No sooner had he reached the great street than he was shot in the back by a man wearing the official costume of the Chinese Government, and fell dead. His interpreter was wounded, but succeeded in making his escape and giving the alarm.

The other ministers believed that a general massacre had begun, and with their people, who had already taken refuge under their several flags, they fled precipitately to the British legation, which, having been the residence of a high prince, covered a large space of ground and was surrounded by strong walls, forming a citadel capable of defense. It had accordingly been agreed upon as a place to make a stand in the last resort, and Sir Claude MacDonald not only generously welcomed his colleagues, but received all their people, whether civilian or missionary. The missionaries were accompanied by their converts, Catholic and Protestant, to the number of nearly two thousand. For the converts an asylum was secured in the grounds of a Mongol prince on the opposite side of a canal from the British legation. Professor James, the man chiefly instrumental in securing it, was

himself slain by the enemy in the afternoon of the same day. Had the enemy followed up their advantage they might, perhaps, in the midst of our first confusion, have overwhelmed all the legations; but they feared to come to close quarters.

Some of the outlying legations were destroyed by fire, but most of them were included within our line of defense. None of them, however, except the legation of Great Britain, was considered safe for the residence of a diplomatic family.

Within the gates of the British legation, which covered six or seven acres of ground and contained twenty or thirty different buildings, were congregated nearly one thousand foreigners, and from this time for eight weeks we were closely besieged, not by Boxers, but by the soldiers of the Chinese government. That very evening, at nightfall, they opened with a terrible fusillade, and this was renewed day after day, chiefly under cover of night; so that we came to speak of it rather contemptuously as a "serenade." It was not, however, altogether ineffective, for day by day some of our men were killed or wounded, and in the sorties, which were occasionally made to drive our assailants back or to silence their batteries, the casualties were always serious.

What we most dreaded was the firebrand, and when the ruthless enemy, with more than vandal ferocity, set fire to the library of the Imperial Academy, for the purpose of burning us out, we all had to assist in fighting the flames. Women and children, including the wives of ministers, passed buckets from hand to hand. A change of wind came to our aid, and the legation was saved. At first the enemy assailed us only with fire and small arms; gradually, however, they got guns of considerable calibre in position, and at all hours of the day attacked us with shell and round shot.

Mrs. Conger, wife of the minister, in whose family I was kindly received as a guest, had embraced the ideal philosophy of Bishop Berkeley, and looked on all this pyrotechny as a play of the imagination. I envied her the comforting delusion, for when I went out and picked up a six-pound round shot, I found it too heavy and solid to be resolved into a fancy. Whether owing to her philosophy or to her Christian faith, she is one of the most admirable women I ever knew; calm and unperturbed in the midst of danger, she realized the description which Pope gave 200 years ago of his ideal woman, as "Mistress of herself though China fall."

Mr. Conger, an old soldier, who fought through all the years of our civil war and marched with Sherman from Atlanta to the sea, met the trials and exigencies of this occasion with becoming fortitude and cool judgment. Diplomatist as well as soldier, he knows how to deal with the most serious questions that confront him as negotiator in this Chinese problem. His daughter, Miss Conger, had visited many water cures in quest of health. The fire cure to which she was now exposed proved to be the required remedy. On the first fire she threw herself weeping into her father's arms; the next day she listened to it calmly, and then from day to day she seemed to acquire new strength, until she came out of the siege restored to perfect health.

If I be asked how we spent our time, I answer, there was no frivolity and no idleness. Every man had his post of duty. Mine was to serve as inspector of passes at the legation gate for Chinese going back and forth between the legations within our lines. There it was my sad lot to see many fine young men go out full of life and hope, to come in wounded, maimed, and dying. We lost in all, killed and wounded, more than a third of our number.

If we are asked what we lived on, I answer, the coarsest of bread and the

poorest of meat. The meat was that of horses, varied by an occasional mule; even that was so reduced in quantity that only three ounces per diem was allowed for each individual. Milk was a luxury; even condensed milk beyond our reach, and no fewer than six or seven infant children perished for want of it.

While the men fought or mounted guard the women made sand bags from day to day to the number of many thousands for the strengthening of our fortifications, and by their calm demeanor and hopeful words they strengthened the arms of their brave defenders.

On one occasion it was deemed necessary to make a desperate effort to regain possession of a portion of the city wall which dominated these legations. A company of some 60 men—American, British, and Russian—was formed under the lead of Captain Myers, of the U. S. Marines. When ready to make the attack, and hoping to take the enemy by surprise, he made a short speech.

"My men," said he, "within yonder legation there are 300 women and children whose lives depend upon our success. If we fail, they perish and we perish with them; so when I say 'GO,' then go."

The Americans and English were thrilled by his words, and the Russians understood his gestures. All felt that it was a forlorn hope, and all were ready to lay down their lives to insure success.

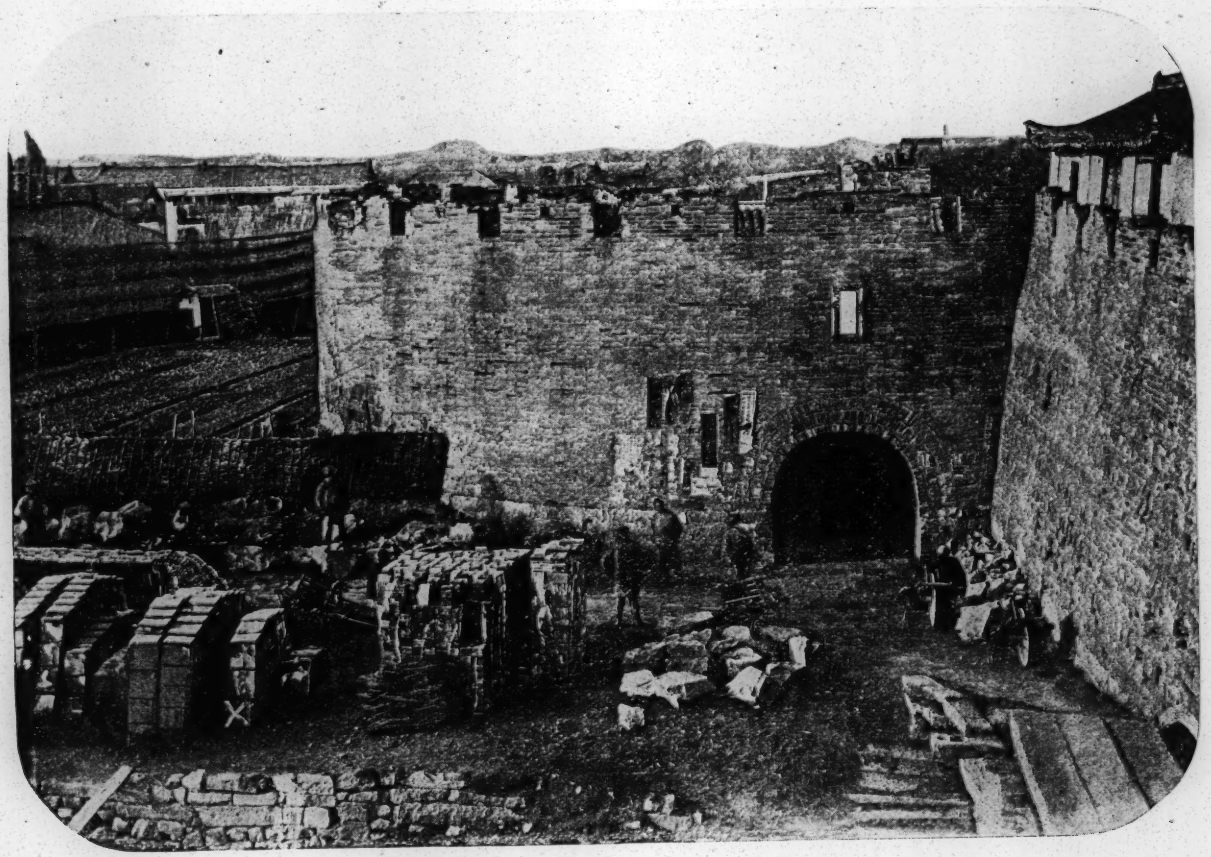
The movement proved successful, and that portion of the wall remained in the possession of our men until our rescuers entered by the water-gate beneath it.

THE RELIEF.

When the siege began we expected relief in a few days; but when Seymour's column was driven back we tried to wait with patience for the coming of the grand army under the eight banners. Yet so closely were we shut up that we had almost no information as to its movements, and our souls were sickened by hope deferred. At length, when our rations had run almost to the lowest ebb, when we had horse meat for only two days more and bread for no more than a fortnight, so that starvation actually stared us in the face, one night, on August 14, a sentry rushed into Mr. Conger's room, where I also was trying to sleep, and cried out, "They are coming; they are coming; the army of relief! I hear their guns!" The minister and I were soon in the open air; we did not wait to put on our clothes, for we had never taken them off. We heard the machine guns playing on the outer wall, and never did music sound so sweet. It was like the bagpipes of Havelock's Highlanders to the ears of the besieged at Lucknow. The ladies were wakened, and soon men and women poured out from all the buildings and listened with irrepressible excitement to the music of the guns. Women threw themselves on each other's necks and wept, while men grasped hands with feelings too deep for utterance.

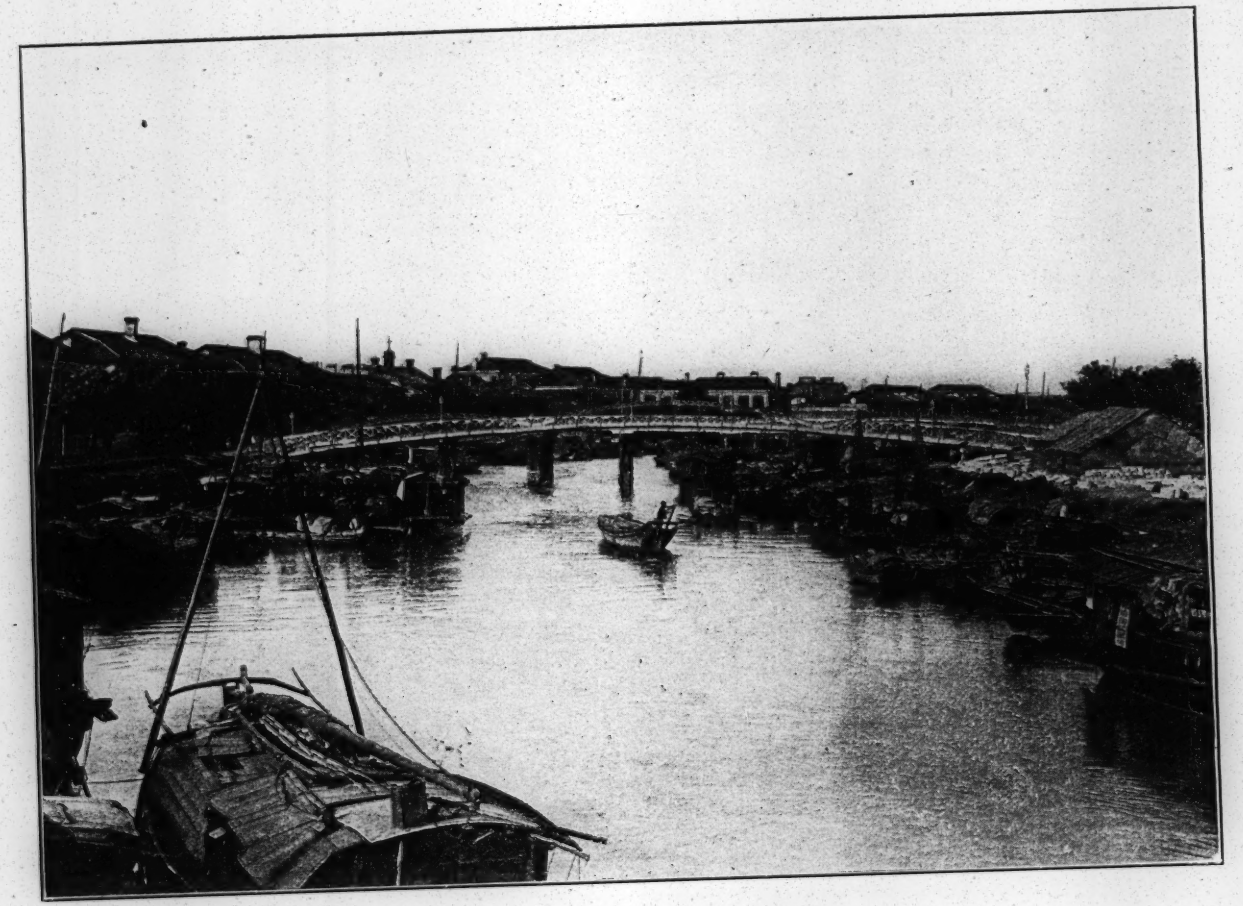
The next morning the great gates of the legation were thrown open, and in rode a company of Indian cavalry. They were, I thought, and I have no doubt every one of our besieged garrison thought the same, the finest men I had ever looked upon.

The siege was ended. The rest of the army entered by the great front gate of the city, the key of which had been captured from the flying enemy by Captain Squires, of our legation, who is one of the heroes of the siege. The next day we all joined in singing a Te Deum in the tennis court of the legation, and Dr. Smith in a short address pointed out ten circumstances in each of which the finger of God was visible in our deliverance. He might have extended them a hundred. After thanking God, it only remains to thank our noble President for having dispatched the army and navy to our succor without waiting



Old Gate in City of Pekin.

From Commander Harrie Webster's collection of Chinese pictures.



Suchau Creek at Shanghai.

From Commander Harrie Webster's collection of Chinese pictures.

to call an extra session of Congress. I feel proud of my country for the record she has established on this occasion, not only taking her place among the Great Powers who have interests as wide as the world, but showing that her arms are long enough to protect and rescue her people in all parts of the globe.

INDEMNITY FOR NATIVE CHRISTIANS.

The curtain has not yet fallen on the last scene of this tremendous drama. The Empress and her court fled the city almost at the moment when our troops entered it, and she has taken refuge at an old capital in one of the northwestern provinces. Whether the government will be reëstablished at Pekin is highly problematical. For my own part, I think the restoration of the young Emperor, who might carry out his progressive measures under the supervision of the Great Powers, offers the best solution. The integrity of the empire would then be maintained and possible conflicts between European claimants averted.

China must, of course, pay a heavy war indemnity. It is understood that not only the foreign nations, but individual foreigners, will be indemnified; but no assurance is given that any compensation will be made to native Christians, whose houses have been burned and whose relations have been slaughtered. Diplomatists and military men have joined in acknowledging that but for the bone and muscle supplied by those native Christians, the defense of the legations would have been impossible. Though they performed the humble office of navvies in building barricades, digging trenches, and countermining against the enemy, their services were indispensable to the common safety.

I cannot believe that any Christian country will consent to the gross injustice which is involved in excluding them from the provisions of the indemnity clause.

The greatest enemy to the orderly and profitable intercourse of nations is heathen darkness. No restriction, therefore, should in any way be placed on the operations of missionary bodies who seek to dispel that darkness, and to diffuse the light of science as well as religion. Without these our railway and mining enterprises will be insecure, and we can have no assurance that that monster, the dragon, who has now been cast down before the Soldiers of the Cross, will not again raise his head and bring about another catastrophe similar to that which has so lately horrified the world.

SINGAN—THE PRESENT CAPITAL OF THE CHINESE EMPIRE

SINGAN owes to its position the distinction of being for at least the fifth time the capital of the Chinese Empire. The mountain valley in which it is situated is marked out by nature to be the center of the national life. Through it flows the Weiho, along whose banks lies the great road which leads from northern China into Central Asia. Near the city the river is joined by a northern tributary, the Kingho, and then, running east, it breaks through the mountains by the "gate of Tung-kuan," where there is a famous fortress of the same name. This gives an easy access to the eastern and coast provinces. In

this valley also are the only practicable passes, two in number, over the Tsin-ling Mountains, which form the barrier between northern and central China.

In consequence of these unrivaled advantages, trade routes from every direction have converged here from time immemorial and made it a place of great commercial importance, famed for the enterprise and wealth of its merchants. It is the trade center from whence the silk of Chekiang, the tea of Honan and Hupeh, and the silk and sugar of Szechuan are distributed to the markets of Mongolia, Turkestan, and Russia in exchange for rhubarb, musk, medicinal plants, opium, wool, and furs.

The valley of the Weiho is one of the granaries of China, and the city itself is in the midst of a vast wheat field. The traveler approaching from the east passes through a country "like one continued splendid park, with knolls and lawns and winding paths." The road is a "fine highway—for China, with a ditch on either side, rows of willow trees here and there, and substantial stone bridges and culverts over the little streams which cross it." The city is surrounded by a high wall, said to be forty miles in circumference, with four huge gates flanked by magnificent towers. The principal streets are well paved, and full of good shops, together with palaces, imposing temples, and government buildings.

One of the few European travelers who have visited Singan, the Rev. A. Williamson, says that it appeared to be "densely filled with houses, having little or no vacant ground or gardens as in other cities." At that time, 1866, it was the residence of a Roman Catholic bishop, who claimed that there were about 20,000 Christians in his diocese. Its population is variously estimated from five hundred thousand to a million souls. Michaelis, who visited it in 1879, writes of the courteous treatment which he received wherever he went from the crowds which thronged the streets.

Though Singan contains no buildings of great antiquity—a mosque built in the ninth century is probably the oldest structure—the famous Pei-lin, or "Forest of Tablets," is the most valuable archæological and historical museum or library in China. Here are tablets which chronicle events of five dynasties from B. C. 100. Others are apparently mere specimens of elegant calligraphy and drawings of well-known mountains and historical scenes. There are also emblematical animals, sacred birds, and likenesses of their great men. Among these is a full-sized portrait of Confucius and several of his disciples. The most celebrated of all are the Thirteen Classics, cut in stone, dating from the Han dynasty, far anterior to those in Pekin, now so famous. The most interesting monument of past times to the Occidental visitor, however, is the Nestorian tablet, commemorating the introduction of Christianity into China. On it is an inscription in Syriac and Chinese characters giving first a vague abstract of Christian doctrine, and then follows this passage:

"In the time of the accomplished Emperor Taitsung, the illustrious and magnificent founder of the dynasty, among the enlightened and holy men who arrived was the most virtuous Olopun, from the country of Syria. Observing the azure clouds, he bore the true sacred books; beholding the direction of the winds, he braved difficulties and dangers. In the year A D. 635 he arrived at Chang-an; the Emperor sent his Prime Minister, Duke Fang Hiuenling, who, carrying the official staff to the west border, conducted his guest into the interior. The sacred books were translated in the imperial library, the sovereign investigated the subject in his private apartments; when, becoming deeply impressed with the rectitude and truth of the religion, he gave special orders for its dissemination."

The imperial proclamation, which is

given, commends the principles of this new religion and closes with these commands: "Let it be published throughout the Empire, and let the proper authority build a Syrian church in the capital in the I-ning Way, which shall be governed by twenty-one priests." Then comes a summary of prominent events connected with the "Illustrious Religion" and a recapitulation of them in an ode in octosyllabic verse. At the end is the date of its erection, A. D. 781, "in the second year of Kiengchung, of the Tang dynasty, on the 7th day of the 1st month, being Sunday," and the names, possibly of donors, of sixty-seven priests in Syriac characters and sixty-one in Chinese.

The tablet, which is said to be the oldest Christian inscription yet found in Asia, was discovered in 1625 and is now in a brick inclosure outside the city walls amid heaps of stones, bricks, and rubbish. Its preservation is due, strangely, to the care of a Chinese, as an inscription on the edge of the stone shows. It is to the effect that, in 1859, a man named Han-tai-wha, from Wu-lin, had come to visit it, and had found the characters and ornamentation perfect. and that he had rebuilt the brick covering in which it stood. The last words are: "Alas! that my friend Woo-tze-mi was not with me, that he also might have seen it. On this account I am very sorry."

The tablet is, or was—for it may have been destroyed in the fanatical hatred of all that is foreign which has taken possession of the people—a striking witness of the power which the Christian faith had over the Chinese a thousand years ago and in the nineteenth century, for this restorer and his friend must have been native Christians.

It is remarkable that Singan is identified with the greatest men whom China has produced and with the most glorious epochs of Chinese history. This is especially true of the time, B. C. 1122, when it was first made the capital of the Middle Kingdom by Wu-wang, the founder of the Chau dynasty.

"No period of ancient Chinese history," says Dr. Wells Williams, "is more celebrated among the people than that of the founding of this dynasty, because of the high character of its leading men, who were regarded by Copernicus as the impersonation of everything wise and noble." The Emperor, with his father and brother, ranked "among the most distinguished men of antiquity for their erudition, integrity, patriotism, and inventions." It was then known, and for many centuries afterwards, as Changan, or "Perpetual Peace"—a name still preserved as that of one of the quarters of the modern city. In B. C. 246 one of the greatest rulers China ever had chose it for his residence. This was Chi Hwangti, the "first universal emperor." Though a boy of but thirteen years of age when he ascended the throne, he speedily showed great capacity for governing and as a warrior. To improve the communication between his capital and the provinces he constructed magnificent roads and bridges, some of which remain to the present day. This work was carried on by his successor, who is said to have spanned the valleys of the neighboring mountains with suspension or "flying" bridges, thus anticipating western science by twenty centuries.

But the "universal emperor's" fame as conqueror of the Tatars and the builder of these public works and the Great Wall is eclipsed by his unwise efforts to secure certain reforms. He had become convinced that the fanatical worship of the past which characterized the teaching of the scholars was fatal to progress and full of danger to the state. He determined therefore to break once and for all with the past, and ordered that all books having reference to the past history of the Empire should be burned. This decree, which was almost universally obeyed, and with considerable loss of life, apparently but strength-

ened the evil against which he was striving. It is a significant commentary on his act that in the Chinese schools of today history later than the accession of the present dynasty, 1643, is not taught. The literati, it may be added, disregarding the true reason of his decree, attribute it simply to his vanity—the hope "that he might by this means be regarded by posterity as the first emperor of the Chinese race."

Nearly nine hundred years later Singan is again made the capital by Taitsung, who so cordially welcomed the Nestorian priest. He was "famed alike for his wisdom and nobleness, his conquests and good government, his temperance, cultivated tastes, and patronage of literary men. He established schools, and instituted the system of examinations, and ordered a complete and accurate edition of all the classics to be published under the supervision of the most learned men in the Empire." It is probably not too much to say that during his reign this now almost unknown city was the center of the most advanced civilization that existed at that time on the earth. Soon after his death the throne was usurped for twenty-one years by a woman, who bears a remarkable resemblance in some respects to the Dowager Empress who now exercises supreme power in this ancient city.

In our own times Singan is noted for the brave and successful defense of its inhabitants against the Mohammedan rebels in 1865, although there were some 50,000 of their coreligionists within the walls. These were compelled to abjure their faith on pain of death, and to put up in their mosques inscriptions to the emperor and to Confucius.

The situation of the city, over six hundred miles from the coast, and its impregnability to any force that it is likely could be brought against it will probably make it seem for the interest of the present rulers of China that it should be once more the permanent capital of the Empire. From its history in the past we may hope that this will be the presage of an era brighter for the Chinese than that which is apparently closing.

JAMES MASCARENE HUBBARD.

THE MIDNIGHT SUN IN THE KLONDIKE

AFTER the long, dark, dreary days of winter, summer approaches with marvelous rapidity. Before the snow has all disappeared the days are twenty-four hours long, and there is no need for candles or lamps during the months of June and July and part of May.

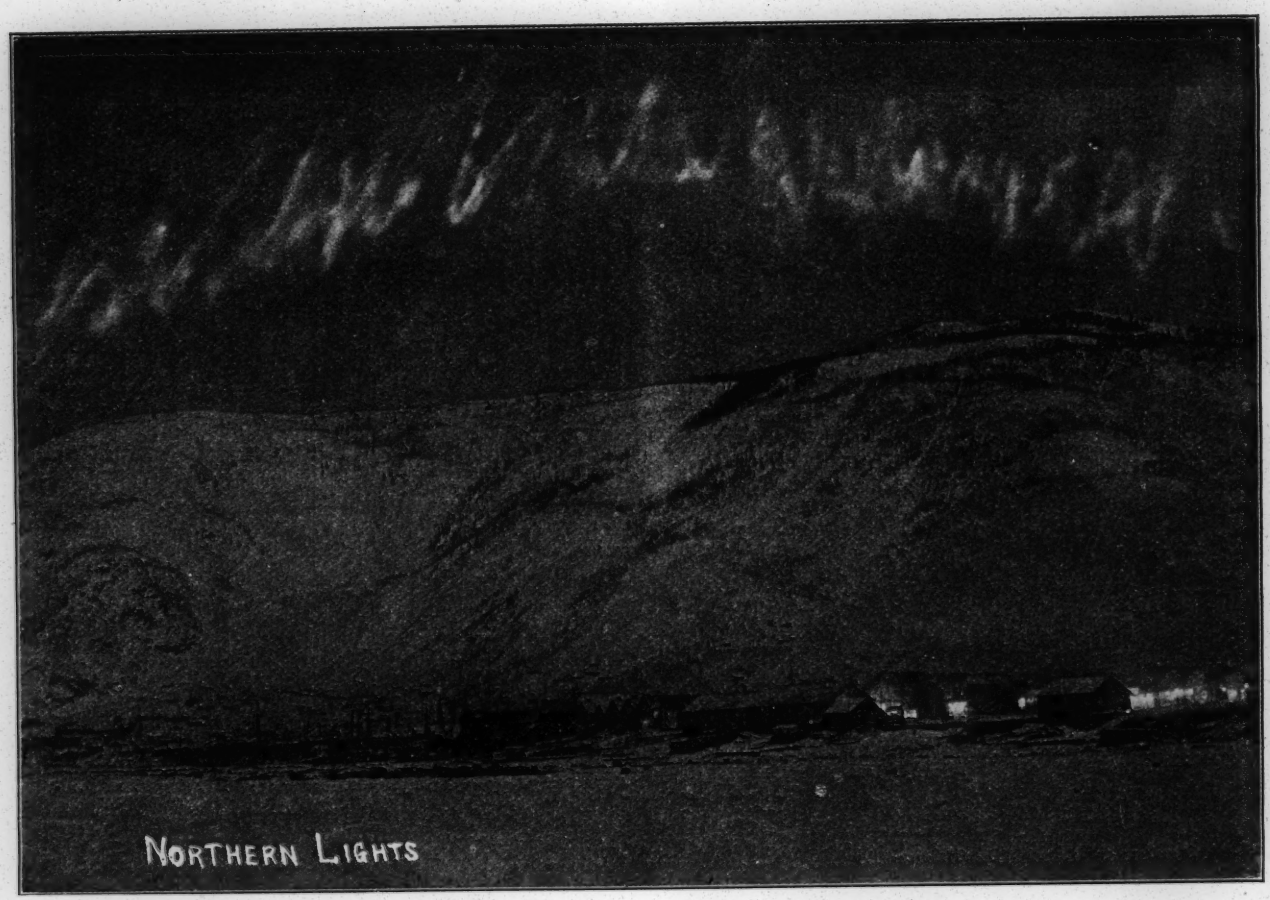
About the middle of June photographs can be taken quite distinctly at midnight. Many, fond of climbing, like to mount the highest domes and watch the sun at midnight. If the night is clear, they are well repaid for their climb. There is a strange, weird look about the sun at such a time—a sort of tired look, as if he would like to disappear below the horizon for a little rest, and then mount in the morning like a giant refreshed.

He marches steadily on, and just as we think he will descend below the skyline, he gradually turns eastward and heavenward and soon begins to flood the lesser hills with light and warmth. We then turn homeward, for if caught too far from home when the sun has regained height and power, we shall feel in no mood for walking, as the summer days in the Klondike are fiercely hot and wearying.

What a contrast there is between the dark, sunless, icy days of winter and the bright, glaring, almost unbearably hot days of summer!

ALICE ROLLINS CRANE.

MIDNIGHT SUN, DAWSON, JUNE, 1900



NORTHERN LIGHTS

THE NORTHERN LIGHTS

AFTER an intensely dry, cold day I have watched for a display of the Northern Lights and have been rewarded by seeing one of the most beautiful displays nature can afford.

At its first appearance the Aurora is hardly noticeable, but in a few minutes the bright, luminous cloudlet enlarges and rapidly rushes from east to west and from west to east, across the northern sky.

Sometimes the phenomenon will dip down almost to the earth and envelop in its bright folds tree tops but a short distance away. Then it puts one in mind of a rainbow reaching the earth and allowing one to look through its iridescent bars to the hazy landscape beyond.

It shines steadily for a while, then suddenly, as though a gentle breeze were toying with its beauty, the lambent flame begins to quiver, then becomes strongly agitated, and at last rushes along from side to side, like the opening and shutting of a silvery fan or the wings of a swan when he is pluming himself on the bank of a stream.

I have never noticed the rainbow-like colors depicted in some paintings. The light was more like steam rising at night, brilliantly illuminated by a beam of electric light.

Then at times it would gradually fade till it resembled phosphorescent waves barring the progress of a ship.

At such times visitors coming into our cabin from the dry, crisp air would pull off their skin mitts amid a cackling of electric sparks; our blankets and fur coats, if rubbed, would give out a succession of sparks, and our hair would try to stand away from the head like quills on a porcupine, and if brushed would snap and sparkle very distinctly, all the time clinging to the brush or to anything placed above the head. I have walked to the stove and with my knuckle drawn a spark from the metal top half an inch long.

ALICE ROLLINS CRANE.

JAPAN AND CHINA—SOME COMPARISONS

By Commander Harrie Webster, U. S. N.

IN many respects the people of China and Japan are not comparable, because their ethical, racial, and ethnological differences are so marked as to make comparison misleading.

But the wider and more continued the field of observation, the smaller become the differences remarked. The observant traveler will assert that the Chinaman's eyes are as horizontal in their major axis as are ours. The assertion is quite correct! The slanting effect is caused by the configuration of the eyebrow, and to some extent by the tendency of the Chinaman to keep the eyes partly closed, due to the absence of a projecting visor or peak in their head coverings. As a matter of fact, the eye sockets in the Chinese skull are shaped and arranged practically as are those in the Caucasian. Examples in support of the position here assumed might be multiplied, but this, the most striking, seems sufficient to substantiate the contention.

The Japanese hold the position of

being the most progressive people of which history gives any account, and the most singular fact in connection with this progress is that its genesis was spontaneous, no outside influence or pressure being brought to bear to effect the tremendous changes in the governmental system and methods.

The change was a true evolution, and was carried out with practical unanimity by governors and governed alike.

A point seldom or never noted by travelers or writers on ethnological subjects is the odor possessed by the various tribes of men, and for want of a better phrase I will call it the "race smell."

The race smells of several members of the human family are distinct enough to influence not only their neighbors, but the domesticated animals of other races. Witness the race smell of the North American Indian, sufficiently marked to be disagreeable to white nostrils, and to be a source of alarm to our horses and dogs.

From observation I am led to conclude that the accidents of clothing, habits, and environments are operative upon the race smell only as modifiers, increasing or decreasing that smell according to circumstances. Witness the strong race smell of the Negro, persisting in spite of the environments of ages of civilization.

The application of the foregoing to the question under discussion lies in the fact that the race smell of the Japanese is so slight as to be scarcely recognizable, while the Chinaman has the race smell so well developed as to be distinctly noticeable in any considerable assemblage. Its marked feature is that it produces a distinct tingling in the end of the nose of the European, and once experienced will never afterward be mistaken. The Chinaman says we smell like sheep, and our race smell is as disagreeable to him as his is to us, another and novel application of the old adage of "*de gustibus non est disputandum.*"

In Japan one looks in vain for examples of bygone architectural ability, for the remains of bridges or monuments, roads or temples, and the idea impresses itself upon the mind of the observer that Japan is a new country, that its past is but of yesterday in comparison with China, Korea, or India; but this impression is speedily forgotten when an examination of the literature, laws, language, and art discloses the fact that Japan counts her history by thousands of years, and that her literature contains examples written before the day of the Roman Empire. We are shown pieces of bronze-work two thousand years old. We look upon an emperor who is the one hundred and twenty-first of an unbroken dynasty which was founded 660 B. C. !

We are impressed with the national virility which can, after so many centuries of existence, voluntarily modify its system of government into sympathy with the ideas of today, and follow up that tremendous change by adopting the best the modern world has to offer in every branch of human thought, and adapting itself as a people to the use of all those ideas which form the difference between the universe of yesterday and the world of today. Whether their attempts are successful is not pertinent to the subject, for, looking at the intent of the Japanese nation as exploited by her leading men, we see that, modified, it is true, by the environments of their traditions and history, Japan is well in the forefront of the family of modern nations.

In China, on the other hand, but little of interest presents itself which is not a monument of a long-departed glory. Splendid bridges, huge gateways fashioned in stone, canals, bronzes, remain unequaled elsewhere for beauty and fitness of design, a literature stretching back beyond the limits of any written history outside of this huge empire. China is of the past; her dreams are all reminiscent; her efforts are expended in

preserving what has been created rather than in producing aught of credit for the present.

It must be conceded that the signs of past ability in nearly every direction of human thought and labor compare favorably with the remains of any nation; and with that China is satisfied. Progress and the adaptation of the mental powers to the requirements of modern needs find no favor with the average Chinaman; and perhaps it is in some sense fortunate for our *amour propre* that it is so, for if the tremendous mental acumen and brain subtlety possessed by this singular and very gifted race were earnestly applied to the problems of modern life it is extremely doubtful if the intellectual superiority of the Caucasian would be so much in evidence as appears at present.

In real mental power, in the ability to grasp the most abstruse conceptions, I doubt if there can be found the equal of the better class of Chinese scholar.

The native of Japan and his yellow brother of China have, however, a marked characteristic in common, and so pervading is this trait and so important as an indication of remote common origin that I think sufficient stress has not been laid upon it by ethnologists and observers. I refer to the persistence and infinite patience shown in carrying out the greatest works without the aid of machinery—"infinite repetition of individual effort" in all branches of labor. In the minds of the people of these two nations time is not an element entering into calculation, and the cost of a piece of work is apparently computed with sole reference to the quantity of labor expended without taking into account the time as such.

The native of Japan is willing to admit that he is not the aboriginal—that is, that he displaced a preceding race—and in doing so either absorbed or destroyed that race.

Not so the proud and haughty subject of the Son of Heaven. He aspires to be first in everything, and in consequence has convinced himself that his race is the only one ever inhabiting the land where reigns the Celestial Empire. The Chinaman contends that he is aboriginal, actually to the manor born, and that China belongs to the Chinese because no other race ever occupied the soil.

It must be admitted that the argument is on the side of the Chinaman, for no history or literature contains the slightest mention of his predecessors. The written records of Japan and China are daily becoming more accessible to the western scholar, and, notwithstanding the disbelief in their accuracy and value, these ancient documents will probably give as much real history as other ancient records of nations better known to the scholastic world.

In the matter of domestic architecture Japan and China are at the antipodes. Throughout the Mikado's Empire the people inhabit structures of wooden framework surrounded by paper walls, so that a fierce wind will often blow the sides of a house in on one side and out on the other. The roofs of these slightly built houses are, however, of strong and heavy timbers, bearing a covering of earthen tiles or thick thatching. The frequent and widespread conflagrations in Japanese cities are not regarded as inflictions to be regretted; on the contrary, the huge fires which sometimes consume hundreds of dwellings are looked upon as blessings, their cleansing and sanitary effects more than offsetting the material losses.

The almost painful cleanliness in a Japanese house is a never-ending subject of comment by foreigners, and the heartiness with which the maids of all work rub and scrub and deluge with water every available bit of wood-work is a real revelation of the innate cleanliness of the "little brown man" and all his belongings. The result of all this persistent cleaning is that throughout the

Empire not an evil smell nor a filthy spot can be found. The vile odors caused by the collection and transportation of human excreta for fertilizer are forcible proof, though not apparent at first, of the instinctive spirit of cleanliness throughout Japan.

With the Chinaman all this is almost exactly reversed. A Chinese house is built in the most substantial manner—of stone or tiles. It is, in fact, according to a trite proverb, intended to last forever, and its condition, while neat, is not especially clean. The condition of the streets in a Chinese city literally staggers belief. The villainous smells rising from the nameless filth of a street in a populous city cannot be adequately described.

Although in domestic architecture these two peoples are so diametrically different, their ecclesiastical constructions are strikingly alike. A Buddhist temple of Japan might be set up in China and little difference would be noted in the building itself, but in its ornamentation, exterior and interior, especially in the images and figures, a marked dissimilarity is observable. In the Chinese temple there is a certain grotesqueness and unreality which is lacking in the Japanese figures. Not only is this true of the modeling and action, but in coloring the difference between the artistic sense of the two nations is very striking. The acute observer can readily assign to a colored figure its correct origin by these characteristics of the two nations whose ecclesiastical art has a common genesis. It is proper to note, however, that in neither example do these artists of the Far East approach in any degree the western standards.

The charitable organizations among the dwellers in the Celestial Empire are the wonder of the western observer. The altruism born of countless centuries of civilization finds expression in charity as comprehensive in its methods as it is universal in its expression. In China there is scarcely a type of misery, of poverty, of sickness, of distress, without its corresponding charity among the more fortunate classes. In fact, charitable organizations are not confined to the rich, but among the poor themselves societies flourish and guilds exist for the amelioration of the condition of those occupying the social strata down to the very bottom in the scale of misery.

The indigent, the sick, the maimed, the friendless, the blind, the beggar, the laborer, the young, the old, the living, and the dead—all in need of food, clothing, medicines, shelter, assistance, burial—are the objects of definite charitable societies, whose members, while constantly on the lookout for their less fortunate neighbors, seldom or never apply for assistance in their good work from the few non-members of some guild or society. Not only are the distressed and sick assisted, but the coolie, the laborer on the bund, the bearer of burdens, is the object of care and charity, and close beside the streets, crowded with porters, "pole coolies," and wheelbarrow carriers, huge earthenware jars of tea are set out, furnished with cups, for the use of those who have no season of rest save on the completion of the task in hand. And it is a pleasant sight to see the smile with which a well-dressed Chinaman will hand a cup of tea to his ragged, sweating brother, burdened almost to exhaustion and parched with thirst. In these charities, as in all other things, the Chinaman is practical, and fine-spun theories give way to the actualities of every-day life.

In practical philanthropy the Japanese and the Chinaman are widely separated, for notwithstanding the fact that charitable organizations exist and flourish among the subjects of the Mikado, they are neither so numerous nor so far-reaching as with the subjects of the Son of Heaven. The Japanese altruism deals rather with theory than with facts; so that the whole difference may be put

in a nutshell by the phrase, "The Chinaman does much and says little; the Japanese says much and does little." In both nations, however, the poor and crippled possess special privileges never interfered with by their more fortunate neighbors. It is said that robbery from a beggar is an unknown crime in either nation.

The "Potter's Field" has no existence in China. The guilds for the burial of the dead see to it that no corpse is unprovided with a coffin and a definite burial place. During my stay in Shanghai a terrible accident on the Woosung Bar resulted in the wreck of the steamer *On Wo* and the drowning of several hundreds of coolies embarked for passage up the Yangtze. These men were of the very poorest class of laborers, and as their bodies were brought to the banks few were identified by friends or relatives for burial. Under the personal supervision, however, of a local mandarin, the member of a funeral society, every unclaimed body was placed in a decent coffin and properly buried after the Chinese style!

Among the Japanese the practice of cremation has long been in vogue, and this method of caring for the dead is adopted for the safe disposition of the remains of those dying without friends or money. In fact, on account of the ravages made by cholera at intervals, the crematorium has become an adjunct to nearly all the cemeteries in the Empire. Among both peoples, however, public mendicancy is a recognized institution, and the street beggar is sure of alms; so it must strike the thoughtful mind that our western civilization does not possess a monopoly in charity, either organized or individual, and that altruism is the property of the human family rather than of any particular branch of that family. These far eastern eleemosynary institutions will surely bear comparison with any mentioned in history.

In the eyes of the Chinaman the soldier is a man defiled by blood, and in the social scale the fighter finds a place in popular estimation with the butcher, the tanner, and the preparer of the dead for burial. It follows from this that the dependence of the Empire for its defense is now and has been for many centuries the arts of the diplomat rather than the generalship of the soldier. Notwithstanding this condition, however, the Chinese have in the course of their long national history done some good fighting on various occasions and for various reasons, and it is not putting the case too strongly to assert that in the future the Chinese will give a good account of themselves on the field of battle in defense of their country, their Emperor, and of their national existence.

Passing now to the Japanese side, we see a nation so filled with patriotism, so earnest in defense of national honor, and so proud of their country, that from the earliest times they have been a fighting people. Altruism, as applied to a common enemy, has found no place in Japanese ethics, and today, having adopted the so-called western methods of warfare afloat and ashore, Dai Nippon is competent and willing to hold its own in any attack from any direction. The fighting man—the soldier—of Japan, in public estimation, stands head and shoulders above his fellows, and the dearest wish of the father of boys is that his sons may be accepted for the service of the Mikado. In all the wars of Japan the government has suffered a true embarrassment of riches in the matter of personnel, every man of the Empire tendering his services in the field for the common good.

Passing from the general to the particular, from the nation to the individual, it is interesting to note a few of the more common or ordinary differences in the two nations. The Chinaman, in a general way, is a fat and robust man; he shows the influence of prosperity by

an increase in girth; his walk becomes stately; his expression benignant and kindly. He enjoys rich food and a good deal of it. The Chinaman of wealth and position clothes himself literally in purple and fine linen, and shows in every action an appreciation of the good things of this life.

On the other hand, the Japanese, rich or poor, lives sparingly, eats plain food, and even with this limitation is genuinely abstemious in quantity. He is content with comfort without luxury, and from end to end of the Mikado's Empire it is difficult to find a fat man or woman.

The question is often asked why the punishments inflicted in these eastern countries are so barbarous and cruel.

With the Chinese, as with us, in theory, the two points kept in view in the application of law to the criminal are: first, to make the punishment fit the crime; second, to make a deterrent example for those who, without the fear of consequences, would tend to the commission of crime. It must be acknowledged that on both these points the Chinese methods are typical, and if the criticism is made that many punishments are inflicted out of all proportion to the offense, it is wise to remember episodes in our criminal history when witches were hung, burned, and done to death in various cruel ways. We can remember when the theft of a loaf of bread in England sent the victim across seas a transport for life. Even in our own enlightened land it has frequently happened that the theft of a horse meant death to the culprit. So it may be wise not to criticise the Chinaman too harshly for trying to punish the criminal and instill terror in the evil-doer at the same time.

In all literature on China and Japan the subject of morality, and especially what may be called sexual morality, occupies a due proportion of space, and its discussion is of great interest, but a clear understanding of the subject requires a more careful study of morality in the abstract than most writers can bestow.

In this, as in many other important questions, much depends upon the point of view, and it is very difficult indeed to make a correct and comprehensible presentation of the point of view of the Asiatic upon such a vital subject as sexual morality. Generalization based upon incomplete knowledge is misleading and dangerous, and in connection with this question rests the real status of woman in China and Japan, a subject much too intricate to be presented in the pages of this Magazine.

Perhaps in no single direction do the Chinese differ more from their Japanese neighbors than in the official position of woman. In China a man's wife is of little moment in the public or, more properly, the outdoor life of her husband. She seldom appears on the street, she has no male visitors presented to her, and so far is this effacement carried that to inquire after a wife is regarded as near akin to an insult to the husband.

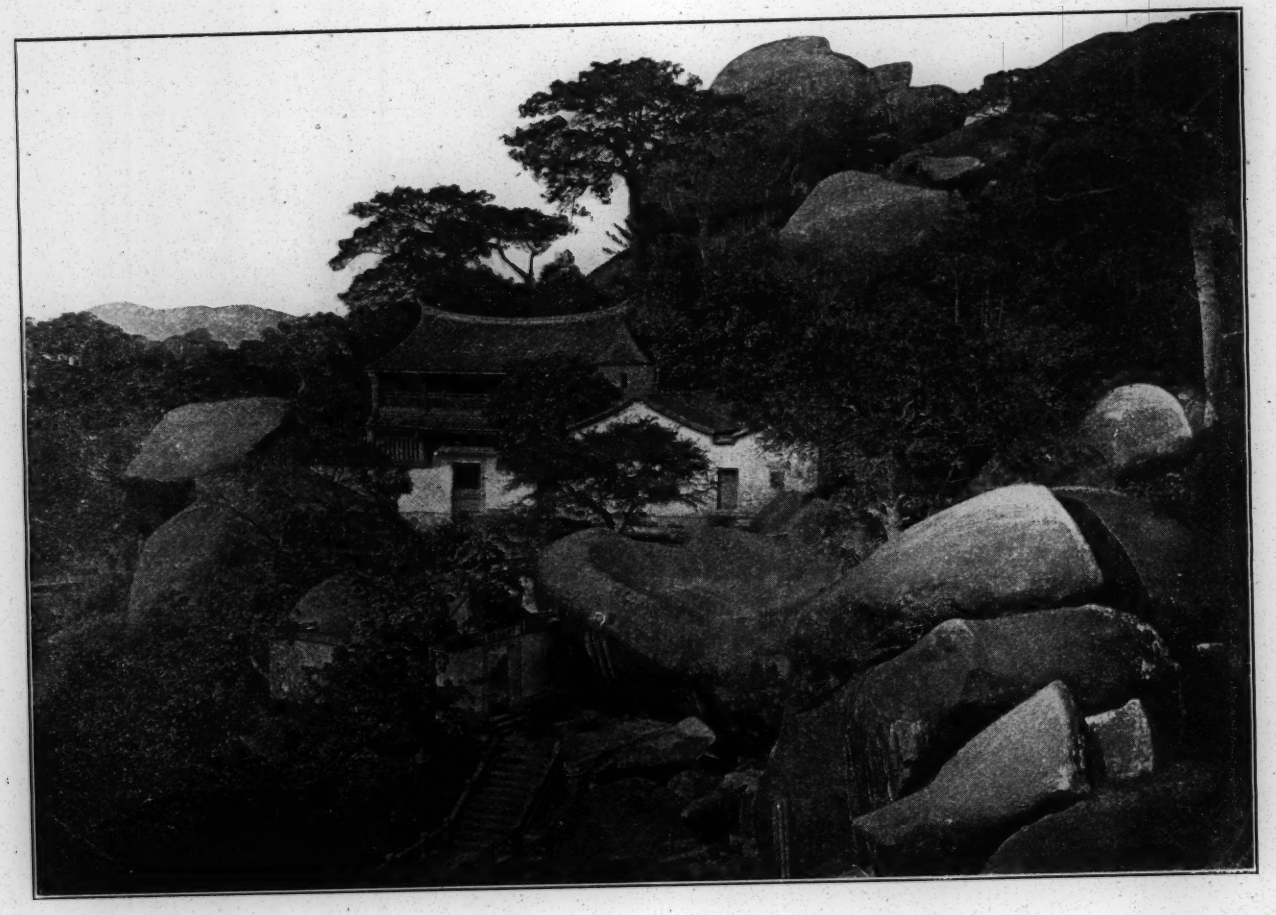
On the other hand, however, it is asserted by old residents in China that in matters of family economy, finance, politics, and the conduct of affairs the woman of the house has a wide range of influence, and in spite of the fact that female education is not recognized as existent, a wife generally manages to have her say in matters of interest connected with the family.

In Japan, women, girls, and children are very much in evidence, and the consideration with which women are treated, the respect shown them in public and private, and the freedom enjoyed by the women of this remarkable country are in marked contrast with the practice in all other eastern lands.

Woman in Dai Nippon enjoys, so far as can be understood by observation and inquiry, precisely the same status as her brother; has the same freedom from social restraints, has the same "right

An Execution in Pekin.—The spectators are more interested in the photographer than in the swordsman.

From Commander Harrie Webster's collection of Chinese pictures.



Rock Temple at Amoy.

From Commander Harrie Webster's collection of Chinese pictures.

of way," and works just as diligently in the field and in the workshop, and, what is more to the point, for *equal work gets equal pay!* This freedom enjoyed by women in Japan is not of recent growth. It is not the outcome of the emergence of the nation from aristocratic feudalism into the light and practices of modern politics and government, but has always existed, and is as much a matter of course as is the contrary in China.

The contrasts and comparisons made in the course of this paper are especially interesting when the histories of these two peoples are compared, for it would seem certain that the remote origins of the Japanese and the Chinese were far apart, the doctrine of modifications produced by environment being inadequate to account for the brain-fiber differences now existing between these two most interesting historical entities.

GEOGRAPHIC NOTES.

THE RUSSIAN ANNEXATION OF MANCHURIA.

BY the agreement concluded between China and Russia in December, the latter will exercise a protectorate over Manchuria in the same sense that the British maintain a protectorate of India. The 400,000 square miles of this province may thus be added to the dominions of the Russian Empire.

The conditions on which Russia consents to allow the Chinese officials to resume the civil government, which was taken from them last summer, are as follows (this agreement thus far applies only to Shengking, the southern and most important province of Manchuria, but it will be extended to include the other two provinces of Manchuria):

"(1) The Tatar General Tseng undertakes to protect the province and pacify it, and to assist in the construction of the railroad.

(2) He must treat kindly the Russians in military occupation, protecting the railway and pacifying the province, and provide them with lodging and provisions.

(3) He must disarm and disband the Chinese soldiery, delivering in their entirety to the Russian military officials all munitions of war in the arsenals not already occupied by the Russians.

(4) All forts and defenses in Shengking not occupied by the Russians, and all powder magazines not required by the Russians, must be dismantled in the presence of Russian officials.

(5) Niuchwang and other places now occupied by the Russians shall be restored to the Chinese civil administration when the Russian Government is satisfied that the pacification of the province is complete.

(6) The Chinese shall maintain law and order by local police under the Tatar general.

(7) A Russian political Resident, with general powers of control, shall be stationed at Mukden, to whom the Tatar general must give all information respecting any important measure.

(8) Should the local police be insufficient in any emergency, the Tatar general will communicate with the Russian Resident at Mukden and invite Russia to despatch reinforcements.

(9) The Russian text shall be the standard."

The "Boxer" movement was scarcely noticeable in Manchuria, and what little there was of it was easily suppressed by the more sensible of the provincial Chi-

nese officials; but the Chinese soldiery rivaled the Boxers of Pekin. Hundreds of miles of the railway were torn up in a single week by Chinese regular troops under the direction of local military commanders. This destruction has not yet been repaired.

It is stated on good authority that Russia has today in Manchuria, and along the frontier of this province, 3,900 officers and 173,000 men, with 340 guns. In addition, between 35,000 and 40,000 men will be despatched by sea to reinforce this large army, and many thousands more will proceed to the Far East over the Trans-Siberian road.

THE POWERS IN CONTROL IN CHINA.

DURING the second week of January, Russia turned over to Germany the Shanhaikwan Railway, which runs from Tientsin to Niuchwang. This road was built by British capital, but as it commands the route from Manchuria to Pekin, Russia seized it early last summer, and has operated it during the past months. On the arrival of Commander von Waldersee the protest of the British bondholders was submitted to him, but he decided against them and the British acquiesced in the decision. It is stated that von Waldersee will now hand the road over to its rightful owners, or at least what is left of the road, for Russia, it is understood, has succeeded in obtaining the following concessions: (1) That Russia shall retain half the rolling stock of the entire railway for the section from Shanhaikwan to Niuchwang outside the Great Wall, which is also in Russian occupation; (2) that Russia shall hold a lien on the railway within the wall for the expenses incurred in repairs, although made with railway property, and in transport operations during the Russian occupation; (3) that Russia shall appropriate the important workshops at Shanhaikwan with all their contents.

BRITISH PACIFIC CABLE.

THE recently awarded contract for the laying of the British Pacific cable from Vancouver to Australia via Fanning Island and Fiji, specifies that the line shall be laid by July 31, 1902, so that in eighteen months at the most the world will be belted by a complete cable system. Nine and one-half million dollars will be paid for the making and laying of the cable, which will measure, including slack, about 8,000 nautical miles.

Great Britain and Canada have agreed to defray five-ninths of this sum, New Zealand one-eighth, and New South Wales, Queensland, and Victoria have pledged to contribute the balance between them. It is proposed to charge 49 cents a word for messages to the United States and 25 cents additional for messages to Europe.

THE DEVELOPMENT OF SIBERIA.

THAT well-worn phrase, "The world of empire westward wends its way," is destined to be contradicted by the growth of Russia during the present century. One hundred years from now it is almost safe to predict the center of the Russian Empire in influence and enterprise, if not in population, will be east of the Ural Mountains.

The great tide of emigration, enterprise, and pluck that is following the iron rails of the trans-Siberian Railroad eastward are strikingly shown in a recent official publication of the Russian Government.

Siberia is roughly divided into two zones, separated by a broad belt of virgin

forest. The northern zone, cold and barren, stretches in an almost unbroken tundra to the polar regions. The southern zone is rich in those climatic and natural conditions that favor industry and perseverance, and it is this zone that the railway traverses.

During the two decades, 1860–1880, 110,000 people emigrated to Siberia; during the next 15 years this number had increased to 680,000, while during the last five years more than 1,200,000 persons, the majority sturdy Russian peasants, have settled there. The present population of Siberia is about 9,000,000.

So great has been the rush of traffic since the line was first opened in 1899 that the equipment has failed to equal the demands upon it.

Of the exports from Siberia corn, sent to the European markets, forms nearly one half. Next come meat, butter (which is shipped in special refrigerator cars to London), tallow, hides, wool, eggs, and game. The chief imports are iron and ironware, sugar, cottons and woolens, machinery, and petroleum.

Even today, when the last stages of the Siberian road are not completed, the journey from London to Vladivostok by railway takes only a little more than half as many days, 24 to 42, as the journey by the Suez Canal. The easiest route between the two oceans is Havre, Paris, Cologne, Berlin, Warsaw, Moscow, Samara, Omsk, Tomsk, Irkutsk, Vladivostok — 7,500 miles. Of this, 6,400 miles, or six-sevenths of the whole trip, fall to Russian railways—4,100 to the Siberian main line and 2,300 to the European-Russian system, 700 to German, 100 to Belgian, and 300 to French lines.

The traveler can reach Shanghai from London or Paris, when the main trunk line is completed, in 16 days, and will have to pay $160 for his first-class sleeping-car express ticket, instead of being 42 days on the route and paying $450 for the journey.

The total cost of the Siberian road to date, constructed as it has been by Russians with Russian money, with all branches and auxiliary undertakings, including vessels and ports, is $385,000,000. In regard to this enormous cost the official report states:

"However large the total may be, it is insignificant in comparison with the advantages held out to Russia by the exploitation of the shortest railway route between the Atlantic and the Pacific, in conjunction with the stimulation of the rich productive powers of a vast country like Siberia and the development of Russia's commercial intercourse with the countries of eastern Asia."

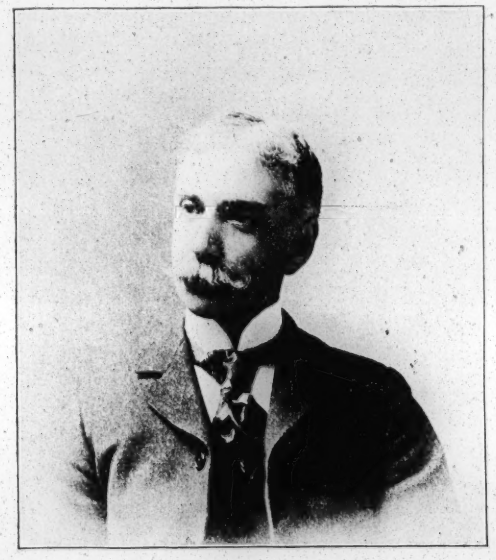
HON. O. P. AUSTIN.

MR. AUSTIN'S paper on a floating exposition, which is printed in the opening pages of the present number, was read by him before the National Board of Trade on January 24, at the special request of that body. The proposition, although a novel one, was received with such favorable consideration that a special committee, consisting of the leading officers of the National Board of Trade, the Philadelphia Museums, the National Manufacturers' Association, and the United States Export Association, was at once appointed to consider its feasibility, and, if found practicable, to formulate plans for a proper organization to put it into operation.

Mr. Austin has been Chief of the Bureau of Statistics since the spring of 1898, and during that time has prepared and published officially a large number of works on topics of current interest, including "Commercial China in 1899," "Commercial Japan," "Commercial South America," "Commercial Africa," "Cuba, Porto Rico, and the Hawaiian, Philippine, and Samoan Islands," "Russia and the Trans-Siberian Rail-

way," "The Colonial Systems of the World," "Submarine and Land Telegraphs of the World," etc., etc.

His earlier literary work prior to his entrance upon official life consists of a series of books on national affairs especially intended for the instruction of youth, including "Uncle Sam's Secrets," "Uncle Sam's Soldiers," while others of the series are still in preparation.



Mr. Austin is a member of the National Geographic Society, and as such his recent contributions to geographic and commercial information have been very favorably received and highly commended.

CUBA AND PORTO RICO.

THE U. S. War Department has recently published two volumes containing the results of the census of Cuba and Porto Rico, taken in the fall of 1899 under the direction of military officers. The volumes are indispensable to those who wish to obtain an accurate understanding of the present condition of these people.

The facts presented in the reports were gathered in all cases by the people themselves, as the most intelligent of the better classes were induced to compete for positions as census-takers by the relatively handsome salaries offered by the U. S. Government. The facts thus gathered were classified under the direction of Messrs. Henry Gannett and Walter F. Wilcox, statistical experts.

These handsomely gotten up volumes, containing many good illustrations, charts, and diagrams which emphasize the figures, can be obtained gratis on application to the War Department. Extracts from these reports, taken from advance sheets, have appeared from time to time in this Magazine, but some further notice may be of interest.

Porto Rico has only one-third of its population engaged in gainful occupations, while in Cuba the proportion is about two-fifths, and in the United States it is about midway between these two. It appears that the relative number of breadwinners is greater in cities than in rural districts. In Porto Rico a relatively larger proportion of women work for a livelihood than in Cuba, although the proportion is decidedly less than in the United States.

It is interesting to compare the kinds of occupation most popular in the islands. In Porto Rico sixty-nine in every 100 working persons labor on farms, plantations, in mines, or are engaged in fishing. In Cuba 48 in every 100, while in the United States only 39 are so engaged. In the manufacturing and mechanical industries, however, these proportions are reversed; in Porto Rico 8 in every 100, in Cuba 15, and in the United States 22 earn their living by transforming raw material into new forms.

THE ATLANTIC WEATHER SERVICE.

PROF. ALFRED J. HENRY, under the direction of the Chief of the Weather Bureau, has established during the last month a meteorological station at Hamilton, Bermuda. This station was needed to complete the chain of outposts planted at strategic points extending from the Lesser Antilles westward and northwestward to the British possessions. Bermuda is in the track of atmospheric disturbances which pass northeastward from the Florida coast, and which occasionally curve northwestward, striking the southern coast of New England. From this vantage point it will also be possible to forecast with greater accuracy the tracks of storms which occasionally develop great intensity in the Atlantic off the coast of the Carolinas.

Arrangements have also been made by the Weather Bureau for a daily cablegram from the Azores, giving the meteorological conditions in that part of the Atlantic, and also for a daily cablegram from London, summarizing the conditions west of Spain, France, and Ireland. As the forecasters of the Weather Bureau can now determine what conditions storms proceeding from the United States will meet, they are able to predict with considerable certainty the direction such storms are likely to pursue.

The U. S. Weather Bureau has already begun issuing to the captains of the trans-Atlantic liners predictions of the weather for three days out of New York.

The advance made in our knowledge of the laws governing meteorological conditions, and especially in the practical application of these laws to the interests of the mariner and the farmer, has been one of the most remarkable recent developments of science. Prof. Willis L. Moore, Chief of the U. S. Weather Bureau, believes that the time may come when scientists will so thoroughly understand these laws that they can with certainty forecast the seasons.

THE U. S. WEATHER BUREAU AT THE PARIS EXPOSITION.

THE United States Weather Bureau exhibit was installed during the month of April and opened to visitors for inspection in completed condition May 15. The building remained open and the exhibit accessible to visitors every day, except Sundays, from 9 a. m. to 6 p. m., from May 15 to September 30, and from 9 a. m. to 5.30 p. m. during the month of October. It was necessary to close a half hour earlier during the month of October on account of darkness, there being no way of lighting the building artificially.

The exhibit was visited by many thousands of people, among whom were meteorologists and those interested in related sciences from all parts of the civilized world. The cloud photographs, the method of making weather forecasts, and the kite and aerial apparatus attracted special attention.

Many interested in aeronautics and air explorations examined the kite exhibit in detail, taking photographs and measurements of the kite, instruments, and apparatus. Notably among these were a number of officers of the German, French, Italian, and Japanese armies and navies.

During the meeting of the International Meteorological Congress, which brought to Paris representative meteorologists from nearly all parts of the world, a special invitation was extended to its delegates and members to visit and inspect the Weather Bureau exhibit. This invitation was accepted, and therefore the exhibit brought the methods, instruments, etc., of the United States Weather Bureau to the attention of those most interested in meteorological work.

It was the special effort of those connected with the exhibit to explain and set forth in the strongest and clearest light possible the aims and methods of the United States Weather Bureau and its practicability and great economic value to the people of the United States and of North America. Special stress was given to the great importance and the value of its weather forecasts and warnings.

As a result of the visit of the Jury of Awards and their critical examination, the United States Weather Bureau was awarded a *Grand Prix*. Gold medals were awarded to two officials of the Weather Bureau, Prof. C. F. Marvin for instruments, apparatus, and appliances, and to Prof. A. J. Henry for cloud photographs.

THE LOSS OF PROPERTY FROM LIGHTNING.

IN 1898 systematic efforts were made by the United States Weather Bureau to ascertain the frequency of damaging or destructive lightning strokes throughout the United States. The results of the first year's work were published in *Weather Bureau Bulletin No. 26, Lightning and Electricity of the Air*, and also separately as *Weather Bureau Bulletin No. 199, Property Loss by Lightning, 1898*. The collection of statistics bearing upon the loss of and damage to property was continued during 1899.

The total number of reports received of buildings struck and damaged or destroyed by lightning during the calendar year 1899 was 5,527, about three times as many as were received during the previous year. In addition to this number, 729 buildings caught fire as a result of exposure to other buildings that had been set on fire by lightning.

The great majority of buildings struck by lightning were not provided with lightning rods. A conservative estimate by Prof. A. J. Henry of the total loss by lightning during the year would probably be $6,000,000. One-half of the buildings struck were barns, sheds, warehouses, etc., and about 7 per cent churches and schools; cattle, horses, mules, and pigs were killed by lightning to the value of about $129,955.

POLAR WORK.

PLANS for the Baldwin-Ziegler North Polar Expedition are maturing rapidly, for, unlike the majority of Arctic leaders, Mr. Baldwin is not hampered for want of funds. Mr. Ziegler, the multimillionaire behind the enterprise, has expressed a willingness to pay all expenses under one million dollars. Half a million was the cost of the Italian expedition of last year, and it was to the complete equipment that was thus possible that the Duke of Abruzzi partially owed his success.

Mr. Baldwin has chosen the Franz Josef Land route. He has had experience with Peary in Greenland and with Wellman in Franz Josef land, and is thus acquainted with the practical difficulties of both routes. Two ships will take the party north, one returning before the autumn ice blocks retreat, and the second remaining with the men through the winter. Mr. Baldwin plans to take a number of tough Siberian ponies with him. The chances are many against his being able to put them to any practical use, but the one chance is worth providing for.

The summer of 1901 will thus witness the simultaneous inauguration of the most systematic campaign to reach the North and South Poles that has ever been attempted. In the Arctics, Peary, Baldwin, Sverdrup, and a Russian party with a vessel of the type of the ice-breaking *Ermak* will push northward, while in the Antarctics two splendidly equipped expeditions, the German and British, will strive to reach the opposite extreme.

THE BRAZIL-FRENCH GUIANA BOUNDARY DECISION.

BY the award of the Swiss Federal Council, the arbitrators in the dispute as to the frontier line between Brazil and French Guiana, Brazil has obtained the main points for which she contended. Brazil obtains 147,000 square miles of the disputed territory and France not more than 3,000 square miles. The dispute dates back to 1688, when France claimed to the Araguary River, which is parallel to the Amazon The boundary as determined by the award is the River Oyapoc and, from the head source of this river to the frontier of Dutch Guiana, the line of the Tumuck-Humack range.

The decision of the Federal Council of Switzerland is a follows:

"1. That the Japoc or Vincente Pinçon of article 8 of the Treaty of Utrecht is the Oyapoc that debouches to the west of Cape Orange, as has been established by the documents which Brazil has submitted to the tribunal, and that the *thalweg* of that river, from its mouth to its source, definitively constitutes the first of the frontier lines between Brazil and French Guiana.

"2. That the other frontier line, from the source of the Oyapoc to the point of junction with the Dutch territory, will be that which article 2 of the treaty of arbitration indicated as an intermediate solution—that is to say, the line of division of the waters in the Tumuc-Humac Mountains, forming the northern limit of the Amazon basin."

ALEXANDROWSK.

ALEXANDROWSK, the little arctic harbor built by the Russian Government on the Murman coast two years ago, is becoming a modest center of arctic commerce. Although north of the arctic circle, it is free of ice the year round, as it is reached by an offshoot of the Gulf Stream.

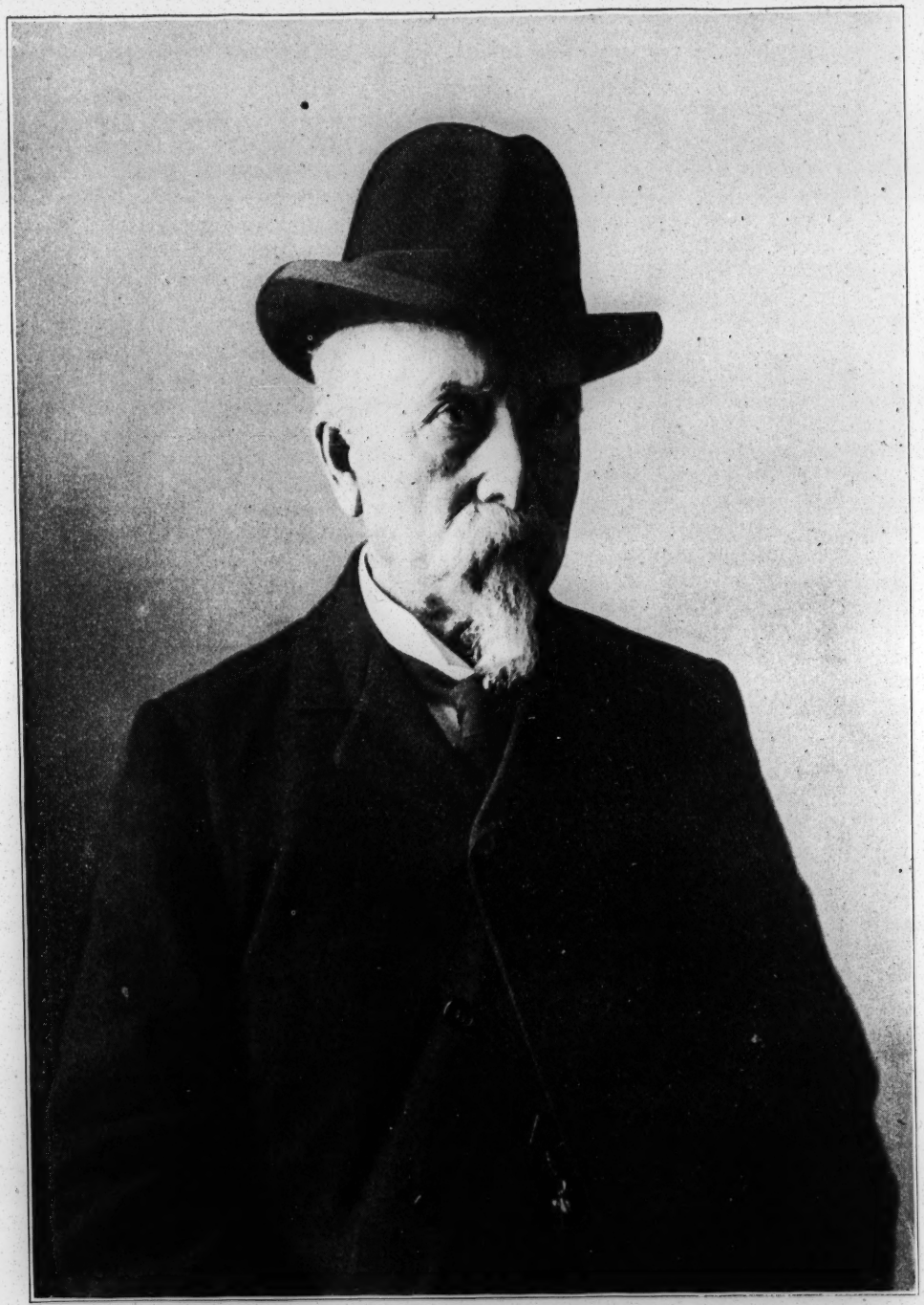
A dam nearly 500 feet in length has been built to protect the harbor, which is deep enough for the largest ships The town has now some 250 inhabitants, mostly officers and laborers, boasts 50 houses, a hotel, and several shops, and is lit by incandescent and arc lamps. The government does not expect the town to grow much larger, but it serves as an outlet for the trade of inland northern Russia, and is a clearing point for the considerable traffic of hides that come down the Obi and Yenisei Rivers.

A CORRECTION.

MR. LITTLEHALES has called attention to an erroneous statement in the note appearing in the January number of this Magazine, entitled "The Principles Underlying the Survey of the Bottom of the Ocean for an All-American Trans-Pacific Cable to the Philippines and the Orient." The correct equation to the curve which, by revolution around a vertical axis, would generate the theoretical form of an isolated submarine peak in which the crushing strength at any cross-section is equal to the combined weight of the portion of the formation above that section and of the superincumbent body of water is

$$y = \frac{\kappa}{\delta'} + \varepsilon^{\frac{2\delta'}{\delta} \log x},$$

in which ε represents the base of Naperian logarithms, κ the coefficient of crushing strength of the materials composing the crust of the earth, δ the average density of these materials, and δ' the density of sea water.



Colonel F. F. Hilder.

DEATH OF COLONEL HILDER

FRANK FREDERICK HILDER, soldier, geographer, and ethnologist, was born in Hastings, England, in 1836; he died in Washington January 21, 1901. Educated at Rugby in the approved manner of the times, he afterward graduated from the British military school at Sandhurst, and entered the army as a cornet in early manhood, at a time when the eyes of all England were turned on India. Sent immediately to aid in quelling the Sepoy rebellion, he soon saw service of such severity—and met it with such intrepidity—that he was awarded the Indian Mutiny medal, with special-service bars for Delhi and Lucknow.

It was during this period of his career that Hilder traversed the Indo-Gangetic plain, trod the Himalayan foothills, and visited the provinces and cities of the northwestern empire from Bombay to Kashmir, and from the Punjab to Nepal, laying the foundation for a broad, yet precise, geographic and ethnologic education; and some of the lectures of even the latest years of his life drew inspiration and significant detail from the researches enlivening these early campaigns. He saw service also in Farther India, Borneo, and the Philippines, and after rising through a lieutenancy to the rank of captain was transferred to Africa. Here he won the Egyptian medal, and his skill as military expert and organizer attracted such attention that after his return to his regiment in India he was recalled and promoted to a colonelcy at the express request of the Khedive.

In Africa, as in India, Colonel Hilder seized every opportunity for scientific research; but his tenure in the Egyptian army was cut short by the terrible experience of a sand-storm, which so injured his eyesight that he decided to abandon a military career. Coming to America on his recovery, Colonel Hilder met again the contagion of military spirit stimulated by our civil war, and did special work of importance in the Engineer Corps, but held so firmly to his election of a peaceful life as to decline an American commission. In the later sixties he became the international representative of a small-arms manufactory, and spent fifteen years chiefly in travel through the several Spanish-American countries; and during this period he acquired an extended and intimate acquaintance with languages and peoples, as well as with national leaders and policies. Impressed by the opportunities for international business presented by the actual and prospective republics of Spanish America, he established a house in Chicago, only to be ruined by the fire of 1871; later he combined business enterprises in St. Louis and Mississippi City with notable researches in the archeology of the Mississippi Valley. Unhappily pursued by conflagrations, he turned to research and publication, making important contributions to the projectors of the Pan-American Railway and the Bureau of American Republics.

Colonel Hilder acted as secretary of the National Geographic Society during the year ending June, 1899, afterward becoming Ethnologic Translator in the Bureau of American Ethnology. He continued in this position to the time of his death, though he was detailed as a special agent of the Pan-American Exposition for work in the Philippines during the earlier half of 1900.

As indicated by his career, Colonel Hilder possessed remarkably strong character; yet he was by instinct a naturalist and student, and devoted the best energies of his life to the increase and diffusion of knowledge. His later publications, through the Bureau of Education and the Bureau of American Republics, as well as through the NATIONAL GEOGRAPHIC MAGAZINE,

the *Forum*, and other standard periodicals, are well known ; while his graceful and instructive lectures, based on personal observations in India, Egypt, South Africa, Central America, the Philippines, and other remote regions, live in the memory of thousands.

W J M.

THE ORIGIN OF YOSEMITE VALLEY.*

MR. TURNER finds that the higher part of the Sierra Nevada has been glaciated, and in support of this belief instances numerous cases of glacial markings and morainal deposits.

If there is any one feature of the higher parts of the Sierra which stands out in bold relief, so that "he who runs may read," it is the fact that it has been covered by glacial ice in sheets and streams, and that at a very recent time. There is no need to search for glacial scratches or moraines. The whole aspect of the terrane is that of great sheets of bare granite, not yet covered with soil, with rounded surfaces, cut by deep U-shaped cañons, containing thousands of lake basins, and presenting cirques and hanging valleys ; in short, everything in the field of vision tells the story of a wholesale ice invasion. Nor was it a brief one, but one which lasted for many centuries, during which cubic miles of rock were carried away, cañons thousands of feet deep were excavated, and the level of the country planed down to an enormous extent.

As to the potency of a glacier for the work of erosion, Mr. Turner is among the few remaining upon the negative side. His argument, however, simply consists in a denial of the ability of a glacier to excavate gorges. That the gorges in the high Sierra were cut by glaciers is true nevertheless. They are plainly the result of channel, not valley, erosion, and channel erosion upon such a scale as this is done only by ice. The line of demarcation between channel and valley erosion in the cañons of the Sierra is clearly marked, and can be determined, one might almost say, to a foot—*i. e.*, the point at which the present visible marks of ice cease and those of water begin. I do not mean that the ice may not have excavated farther down the cañons, but that below certain points, easily distinguished, the subsequent action of water has masked that of ice. If other proof of the competency of glaciers to do the work of erosion upon a large scale were wanting, the presence everywhere of hanging valleys is in itself evidence conclusive. There is no other known agency which could produce them, and today we see them in process of production everywhere in glacial regions, notably upon the Alaskan coast, where there are thousands of them under construction before our eyes.

Holding such opinions concerning the erosive power of glaciers, it is to be expected that Mr. Turner attributes the creation of the Yosemite Valley to other agencies than ice ; indeed, he attributes it to aqueous erosion, aided by systems of fractures in the granite. He finds no significance in the fact that Tenaya Cañon is vastly greater in breadth and depth, as he states, than could be created by the present Tenaya Creek. He passes over without notice the significant fact that every stream, excepting Tenaya Creek, enters Yosemite Valley through a hanging valley, and that the character of the Merced Valley changes abruptly and suddenly to a V-shaped gorge two or three miles below Fort Monroe, at the foot of Yosemite Valley.

It is perfectly obvious to those familiar with glacial phenomena that Yosemite is

* *The Pleistocene Geology of the South Central Sierra Nevada, with Especial Reference to the Origin of Yosemite Valley.* By Henry Ward Turner. Proceedings of the California Academy of Sciences, Vol. 1, No. 9.

quite an ordinary and necessary product of glacial erosion, under the conditions prevailing in that locality. The main glacier came down Tenaya Cañon, cutting it to a steep but fairly uniform grade. Yosemite Valley is but a continuation of that gorge. The end of the glacier, at the time that it was cutting Yosemite, extended not far beyond Fort Monroe. It remained there for a long time, and therefore plowed out the bottom of the valley to a considerable depth. Branch glaciers joined the Tenaya Glacier when it filled Yosemite, coming down the valleys of Yosemite, Little Yosemite, Illilouette, and Bridal Veil and other creeks, and forming hanging valleys at the junction points. The formation of the vertical cliffs of the valley may have been due to undermining, and may have been aided by the cleavage of the rocks. On the recession of the glacier doubtless the bottom of the valley was occupied by a lake, which has since been partially filled by detritus, and drained by the erosion of Merced River cutting through the rock-wall at the foot of the valley.

HENRY GANNETT.

GEOGRAPHIC NAMES.

THE following decisions were made by the United States Board on Geographic Names, January 9, 1901 :

Bloyd ; mountain, Washington County, Arkansas (not Bloyed nor Bloyd's).

Bobs ; creek, Lincoln County, Missouri (not Bobbs nor Bob's).

Carroll; glacier reaching the sea at head of Queen Inlet, Glacier Bay, southeastern Alaska (not Woods).

Chiniak ; cape, the easternmost point of Kadiak, Alaska (not Greville. Hermogenes, St. Hermogenes, Spruce, Tolstoi, Tuniak, nor Yelovoi).

Douglas ; bay indenting south coast of Kupreanof Island, Sumner Strait, southeastern Alaska (not Douglass)

Grand Pacific; glacier reaching Reid Inlet from the north, Glacier Bay, southeastern Alaska (not Johns Hopkins).

Iskut ; mountain, and river tributary to the Stikine in southeastern Alaska (not Iskoot nor Skoot).

Izhut ; bay and cape on southeastern shore of Afognak Island, Alaska (not Ijoot, Ishoot, Pentecost, Sharipof, nor Whitsuntide).

Kates Needles ; mountain near Stikine River, southeastern Alaska (not Kates Needle).

Kisselen ; small bay at head of Beaver Bay, Unalaska, eastern Aleutians, Alaska (not Kissialiak nor Worsham).

Kupreanof ; strait between Afognak and Kadiak Islands, Alaska (not Karluk, North, Northern, nor Sievernoi).

Mooneyham ; branch of French Broad River, Cocke County, Tennessee (not Moneyhan nor Mooneyhan).

Mullin ; creek, post-office, and railroad station, Mills County, Texas (not Mullen).

Nez Perce ; county in Idaho (not Nez Perces).

Nishnabotna ; river in southwestern Iowa (not Nishnabotany, Nishnabotena, Nishnabotny, Nishnabotony).

Reem; creek, Buncombe County, North Carolina (not Reams nor Rims).

Rendu ; glacier reaching the head of Rendu Inlet, Glacier Bay, southeastern Alaska (not Charpentier).

Scajaquada ; creek, in Buffalo, Erie County, New York (not Seajaquada, nor Scajaquady).

Yellow; point on eastern shore of Tamgas Harbor, Annette Island, southeastern Alaska (not Signal).

PROCEEDINGS OF THE NATIONAL GEOGRAPHIC SOCIETY

Popular Meetings.

November 9, 1900.—Prof. Willis L. Moore in the chair. Dr. M. H. Saville, of the American Museum of Natural History, New York city, delivered an illustrated address, "The Ancient City of Mitla, Mexico."

November 23, 1900.—Mr. Marcus Baker in the chair. Gen. A. W. Greely, Chief Signal Officer, U. S. A., delivered an illustrated address, "A trip through Alaska."

December 7, 1900.—President Graham Bell in the chair. Dr. W. A. P. Martin, President of the Imperial University at Pekin, delivered an address, "The Siege of Pekin."

December 18, 1900.—Mr. G. K. Gilbert in the chair. Capt. Ewart S. Grogan, the first white man to cross Africa from south to north, delivered an illustrated address, "From Cape to Cairo."

December 21, 1900.—President Graham Bell in the chair. Mr. Gifford Pinchot, Forester, U. S. Department of Agriculture, delivered an illustrated address, "The Proposed Appalachian Park."

January 4, 1901.—President Graham Bell in the chair. Mr. Joseph Stanley-Brown delivered an illustrated address, "The Franciscan Missions of Southern California."

January 18, 1901.—President Graham Bell in the chair. Mr. Arthur P. Davis delivered an illustrated address, "The Isthmian Canal Routes."

Technical Meetings.

December 14, 1900.—President Graham Bell in the chair. Papers were read as follows: "Winter Precipitation in Relation to Irrigation," by Dr. H. C. Frankenfield; "The Survey for an All-American Cable to the Philippines and the Orient," by G. W. Littlehales; "American Arc Measures," by C. A. Schott.

January 11, 1901.—President Graham Bell in the chair. Papers were read as follows: "The Stenometer as a Distance Measurer," by W. J. Peters; "The Establishment of Compass Deviation Range-marks on Delaware Breakwater," by D. B. Wainwright; "A Topographic Cycle on Glaciers," by G. K. Gilbert.

Announcement of Meetings.

February 1, 1901.—"Mexico, Her Characteristics and Recent Progress," by Dr. Don Juan N. Navarro, Mexican Consul General at New York.

February 15, 1901.—"Explorations in Abyssinia," by Otis T. Crosby.

March 1, 1901.—"The Recent Famine in India," by Gilson Willets.

These lectures will be delivered in the Congregational Church, 9th and G streets, at 8 p. m.

TECHNICAL MEETINGS for the reading of papers and discussion will be held in the hall of the Cosmos Club on the evenings of February 8 and 22.

The committee having in charge the formation of the programs for the technical meetings of the Society desire to invite members to report to the Secretary of the Society the titles of communications bearing upon geographical research that are available for presentation to the Society during the months of February, March, April, and May, 1901.

The subject of the LENTEN COURSE of lectures for this year is "The Countries of Asia." The first lecture of the series will be at 4.20 p. m., Tuesday afternoon, February 26, in the Columbia Theater, 12th and F streets, Washington, D. C.

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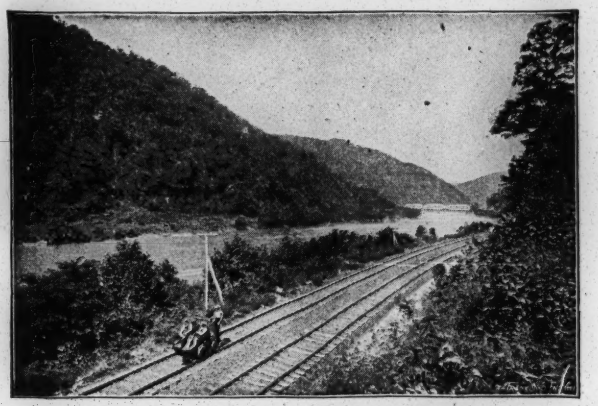

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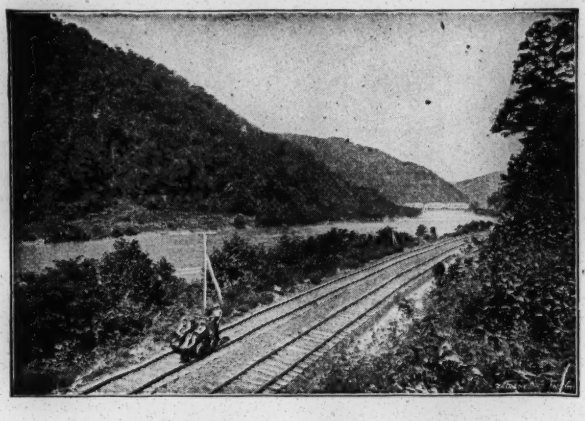

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EDITED BY PROFESSOR J. MCKEEN CATTELL

THE POPULAR SCIENCE MONTHLY for February is a number that should be in the hands of every one who is interested in science. The opening article, on the "LIFE AND WORK OF HUXLEY," by Lord Avebury—perhaps better known in America as Sir John Lubbock—is an extremely interesting account of the great naturalist by one of his most intimate friends. The publication of Huxley's "Life and Letters" makes this article particularly timely. Dr. George M. Sternberg, Surgeon-General of the U. S. Army, contributes an account of malaria and the recent work demonstrating the connection of this disease with mosquitoes—perhaps the most important scientific advance since the discovery of the X-rays, here described by the leading American authority. Mr. Havelock Ellis, editor of the "Contemporary Science Series," begins a series of articles on "British Men of Genius," an extremely interesting statistical and scientific study, now first made possible by the publication of the "Dictionary of National Biography." Professor Simon Newcomb contributes an installment of his "Chapters on the Stars," treating the clustering of the stars and the Milky Way. Professor Newcomb is probably the most eminent American man of science, while at the same time he possesses rare literary ability in presenting clearly and simply the great principles of science. Other articles in the number are an account of important contributions by Professor T. C. Chamberlin, to a theory of the glacial period, by Mr. Bailey Willis, of the U. S. Geological Survey; a description of the New York Aquarium, with illustrations by Professor Charles L. Bristol, of New York University; a description of the Dolmens of Rocknia, by Professor A. S. Packard, of Brown University, and an account of the way in which the weather is treated and mistreated in the newspapers, by Mr. H. M. Watts, of the *Philadelphia Press*. The number contains, as usual, departments devoted to correspondence, to scientific literature, and to notes on the progress of science.

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